UNDERSTANDING THE IMPLICATIONS OF DIGITAL INTERACTIONS ON THE DESIGN OF PUBLIC URBAN SPACES

Submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy (PhD)

Written and submitted by

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2014

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Keywords

Urban informatics

Urban

Planning

Social media

Third place

Social

Place

Networked interactions

Knowledge communities

Communicative Planning

Abstract

Introduction

Networked interaction enabled by social media is changing the ways communities connect and interact. The aim of this research was to investigate the impact of networked social interactions on the design of public urban spaces. Considering how the developing networked technologies, like social media, offer a potential for urban planning, as both tools of communication and insight into community. Viewed through a collaborative and communicative planning theory lens, the study considers the function of public spaces as '*third places*' (Oldenburg, 1989), social places that are familiar, comfortable, social and meaningful for everyday life. Libraries were chosen as a focus case study because they exemplify the qualities of *third places* and providing in some cases a technology rich environment.

The project is positioned at the intersection of urban planning (*place*), cultural geography and urban sociology (*people*), and information communication technology and human-computer interaction research (*technology*)– the triad of urban informatics. There have been limited investigations into urban informatics (the interactions of *people, place* and *technology*) from the urban planners' perspective. This study adds to the knowledge base of how networked interactions can assist planning and the enlivening of cities. It adds to the developing discussion on the future role and positioning of libraries within the broader city context in the digital age.

Methodology

The qualitative methodology of this study involves a mixture of methods. It included focus groups, semi-structured interviews and case studies to gather data from two research sites: Canada Bay, New South Wales, and Brisbane, Queensland. It takes a multidisciplinary approach presenting a thesis by published papers comprising four publications targeted at the audiences of planners, librarians, local government, and urban technology experts.

Research Phase One

The first phase of the research established a guide to current planning practice and the use of ICT. It examines the role of digital technologies in urban planning from the perspective of current planning professionals. The qualitative data collected through focus groups was analysed with thematic coding.

The key findings of this phase include a set of typologies for the use of ICT in urban planning, and recognition of the potential of ICT to facilitate conversation on planning issues with community.

Research Phase Two

The second phase presents a case study of Concord Public Library. Chosen because is represents a *third place*, a social *place* where the community connects and interacts. The research combines data from a range of sources including semi-structured interviews, observations, a survey, and statistical information.

This phase presents findings for the library sector on the importance of the library's role as a *third place*. Created by the library's the ability to build the concept of *place* and linkage with the community both through the use of digital technologies and traditional connections.

Research Phase Three

The third phase of the research also focuses on the public library and its role within the structure of the urban setting. This phase utilises data collected through semi-structured expert interviews. Library managers (expert in their field) were able to interpret the current trends and patterns of library usage. They illuminated ways that digital technology and library planning can work to support the sense of *place* in the library and its strategic positioning within communities into the future.

Research Phase Four

The final phase of data collection was in the form of a case study of the UR[BNE] Festival 2012 and the associated collective of design professionals in Brisbane. It considers some of the ways that a positive use of networked social interactions, can be used to enlivening and recreating urban places that are energising the city in a process termed *communicative urban acupuncture*.

Conclusions

This research establishes a series of roles for digital technology in urban planning including: *technology* for analysis of *place*; *technology* for enhancing *place*; and *technology* for community engagement. These roles were also evident within the case study of a public place, that is the public library.

The development of meaningful *places* can be aided by ICT through the hybridisation of *place*, glocalisation, developing communication in *place* and about *place,* and leaving meaningful trails of information.

The urban acupuncture discussed in the fourth phase of this research, is presented as a means of activating spaces and building hybrid networks (both digital and face-to-face). It can be used to encourage and support community collaboration for placemaking.

Recommendations

Urban planning should adopt the use of ICT for communication with community and in the development of applications specific to the needs of urban planning.

- Urban planning can strengthen as a professional practice through the use of ICT to support their community of practice.
- Urban planning research should further investigate and quantify the value and extent of networked interactions within individual local communities as well as in a theoretical framework.
- Local government and other government agencies can build strong *places* through the development of hybrid interactions based on *place*. The ability to overlay digital information about physical *place*, directed to *places* and community adds a new dynamic to how we can interact and enjoy *places*.
- Libraries can deal with the current threats to their value and purpose by adding value to the digital content of their communities, and acting as a broker for community building and discussion. Libraries can build on their strategic position as the link between the community and knowledge in all its forms.
- Libraries continue to add value to society as physical places – *third places* that bring people, ideas and knowledge together. Libraries also build strong *digital*

places and embrace an emerging *hybridity of place* that enhances glocalisation of communities, with the strength of global networks combined with a local identity and culture.

- Communities use the resources of ICT to build local economies specific to their local context, using principles of glocalisation.

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List of Abbreviations

CPT	communicative planning theory
HCI	human-computer interaction
ICT	information and communication technology
mICT	mobile information and communication technology
NBN	National Broadband Network
NSW	New South Wales, Australia
QLD	Queensland, Australia

Acknowledgements

I confess that I suffer from ‘frantic scheduling syndrome. I find my life has been broken down into half hour blocks of work, family and extracurricular activity. In the midst of this frantic “busy-ness” I found meaning and support in a series of local places with familiar faces, acquaintances and friends. These meetings were generated spontaneously and through an existing group of friends, one SMS led to another, and a cup of coffee. So begins my PhD story…

There are many along the way that have assisted, supported, encouraged and provided direction for my PhD journey. To them I owe a great debt of thanks.
Firstly, my heavenly Father for capacity to learn, understand and grow.
To Jairus for the encouragement and courage to start, continue and complete.
To my patient supervisors: Marcus and Evonne for reading, rereading, direction and support.
To my girls Phoebe, Elhannah and Heidi for putting up with burnt meals, lots of love, encouragement and bringing me back to earth.
To my mother for supplying un-burnt meals, picking up girls and encouragement along the way.
To Mylee for library inspirations.
To all my participants who gave their time, knowledge and expertise: Concord Library, State Library QLD, State Library NSW, Brisbane City Council, Toowoomba Library, Brisbane City Council Library, Sutherland Library, Mosman Library, QUT librarians, Library consultants, Planners in our focus groups and community of Concord Library.
To my coffee shop CBD Di Bella, for providing me with my *third place*, ready smiles and good coffee.
To the urban informatics team for inspiration, discussion and advice along the way, plus the occasional cautionary tale.
Thank you all.

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Kirralie Rochelle Houghton

Signature: QUT Verified Signature

Date: 15/1/2014

Publications and Conference Presentations

Presented as part of Thesis

Journal Articles

Chapter 4

Houghton, K., Miller, E., & Foth, M. (2013). Integrating ICT into the planning process: Impacts, opportunities and challenges. *Australian* Planner, 51(1), 24-33 http://eprints.qut.edu.au/56430/

Chapter 5

Houghton, K., Foth, M., & Miller, E. (2013). The continuing relevance of the library as a third place for users and non-users of IT: The case of Canada Bay. *Australian Library Journal*, *62*(1), 27-39. http://eprints.qut.edu.au/56428/

Chapter 6

Houghton, K., Miller, E., & Foth, M. (2014). The local library bridging the digital and physical city: Opportunities for economic development. *(Commonwealth Journal of Local Governance).*

Chapter 7

Houghton, K., Miller, E., & Foth, M. (2014). Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking. *(Urban Technology.)*

Papers written during candidature on related topics but not included in this thesis

Journal Articles

Schroeter, R., & **Houghton, K.** (2011). Neo-planning: location-based social media to engage Australia's new digital locals. *Australian Planner*, 48(3), 191-202.

Refereed Conference Papers

Houghton, K., Lugmayr, A, & Choi, J-H. (2012). Ambient media for the third place in urban environments. In Jianfei, Cai, Hanjalic, Alan, Magli, Enrico, Pickering, Mark, Friedland, Gerald, & Hua, Xian-Sheng. Proceedings of the 2012 IEEE International Conference on Multimedia and Expo Workshops, IEEE, Melbourne Convention and Exhibition Center, Melbourne, VIC, pp. 364-365.

Schroeter, R. & **Houghton, K**. (2011). Neo-planning: location-based social media to engage Australia's new digital locals. In Proceedings of Planning Institute of Australia National Conference 2011, Planning Institute of Australia, Hobart, Australia.

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Non- refereed conference paper

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Chapter 1: Introduction

1.1 RESEARCH CONTEXT

Two key phenomena of the modern age include the growth of urbanisation and the rapid rise of mobile information and communication technologies (mICT). By 2050, 8.9 billion people across the globe will live in cities (United Nations, 2012) putting intense pressure on their infrastructure and the lifestyle they can offer. The current (2013) estimates, calculate the urban population at around 3.6 billion people, over 50% of the total world population. These modern urban lifestyles are typically fast paced, and such speed within cities is contagious. Mass communication and technologies require speed, and make us want speed (Eriksen, 2006), speed of travel, of communication, and of access to information. At the same time, policy makers and researchers are raising concerns about how populations functioning at great speed, within dense urban settings, can effectively co-exist, interact, and harmonise within these environments (Adam, 1998; Eriksen, 2006; Virilio, 1999, 2000). They are questioning how new digital technologies can enhance and provide places within urban environments that allow for a pause from the speed of life, to connect, interact, and socialise with community. This presents urban planners with a challenge and multiple unanswered questions. How does speed of living and modern digital networking affect our relationship with the other people in our public realms, in terms of both our sense of community, and our ability to find places for convivial social interaction? How can urban designers, managers and shapers of *place* use this information about the new and changing needs of community, to create positive places of social interaction, of contentment, so as to ensure that adequate levels of 'liveability' are achieved within urban environments?

1.1.1 Importance of place

The meaning of '*place'* (as a physical space) and its relationship to networked social interactions is central to this thesis . There are a multiple definitions and elements to *place*. The concept of place is more than a physical space, rather it embodies the social interactions and connections transforming it from space to place.

Cresswell (2004), provides a detailed bibliography of a number of *place* theories in his work 'Place: a short introduction,' where he develops a hierarchy relationship between different types of places from the intimacy of home, to a larger concept of country. Our connection to physical place is emotional, cultural and defining. Humans need physical places to locate themselves, essentially social creatures that look for places of interactions.

Lefebvre (1991) furthers our understanding of *place* with his triad of the ways we relate to the concept of *place*. He includes the three aspects of perceived, conceived and lived spaces. Perceived space, relates to the physicality of *place* and spatial practice within spaces that are used to appropriate that space. Conceived space, is the mental space or conceptualising space that is the realm of scientists, planners and engineers. These are also referred to as the representations of space. The third, lived space or repesentational spaces, relates to how we live socially within space, described as 'space is lived through its associated images and symbols' (p. 39). The aspects of this triad are interrelated and dependent on each other, effectively producing space and essentially producing each other. The process is a social one. Soja (1999) extends the concept with his own spatial trialectics of 'spatiality–historicality–sociality' (p. 57), and here he introduces 'thirdspace' – a concept of spaces that are both real and imagined. To grasp the concept of the spatiality, he says, *place* is more than the physical it is the social interactions, imaginings, and knowledge of space that create *place*. In both Lefebvre and Soja's definitions of place social interaction creates the boundaries that are vital to our understanding of place.

Furthering this thought, we can consider Tuan (2001) who highlights the relationship of experience in the definition of place. He speaks of the types of experiences that can support or provide the development of a concept of a *place,* these experiences are both 'direct and intimate' and 'indirect and conceptual' (p. 6). These experiential types include: biological facts, relations of place and space, as well as the range of experience or knowledge of place. Experience while incorporating our five senses, also incorporates the visual perceptions we have and the indirect symbolisation. Experience is both emotion and thought. This relationship with space or the qualities of place, transcend the interpretations of culture, and are relevant to us all (Tuan, 2001).

This defining of space and the process of adding meaning to create place, happens on both an individual and collective level. The social connections within and about place, add a level of complexity to the notion, and can be further linked to communities and networks. It is through these interactions of *people* and *place* (the social development) that the notion of *place* and the relationships that define urban living are devised.

1.1.2 Communities and networks

Community has been defined as 'a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings' (MacQueen et al., 2001). Communities and networks are both points of social interaction. They meet a specific social need and support the sharing of knowledge, learning, mixing of individuals and the building of tolerance and trust. While the concepts are often used interchangeably (Conway & Steward, 1998; Hildreth & Kimble, 2004; Koku & Wellman, 2004), Dal Fiore (2007) clarifies their difference in order to strengthen their explanatory power. The community is highlighted as closed entities, with boundaries and rules, demanding a level of conformity in order to belong, building a level of trust within that unit. Dal Fiore places networks at the opposite end of a continuum to community. Networks he defines as less bounded, fluid and adhoc. Within these freedoms, networks become spaces of discovery and comparison and therefore support innovation and creation (Dal Fiore et al., 2007).

While networks and communities may be defined separately, that does not mean they are necessarily mutually exclusive. Communities may exist within networks, and networks may exist within communities. Urban lifestyles are enriched through the connections of community and networks that are defined and developed as social capital. Social capital is defined as the social exchanges that build a norm of reciprocity (Putnam, 2001), which is the giving and receiving between individuals and groups within a community. Places that can generate and support community through the development of digitally networked interactions, will assist the process of creating social capital (Jacobs, 1961; Oldenburg, 1989; Putnam, 2001).

1.1.3 Third place and social spaces

When Oldenburg (1989) spoke of *third places* (as distinct from Soja's thirdspaces), he referred to them as being those spaces beyond home (the *first place*) and work (our *second place*) but rather the social '*other places*' were people 'hang-out' and connect with community. Oldenburg's discussion was very centred on these two elements of places with meaning and the social connection of community. Combining these notions in *third places*, he argues, is necessary for healthy urban lifestyles and the development of social capital. Without these types of places individuals become isolated, disconnected, stultified (Jacobs, 1961). *Third places* present eight qualities which support or create the development of social capital: neutrality, social equality, space for conversation, qualities of accessibility and accommodating nature, regular visitors, non-pretentious, playful, and allowing for a sense of belonging (Oldenburg, 1989). When Oldenburg wrote of these *third places* in 1989, his focus was on interactions that are face-to-face or co-present. In an age where modern digital technologies are redefining communication and the relationships between time, place and each other (Dourish & Bell, 2011), the impact, use and interaction of these new media raise questions about how these third places evolve in an information age. How does technology strengthen or weaken these *third places* and how are these social needs best met in the modern era?

1.1.4 The potential of ICT technology to connect and revitalise cities and communities

Some see technology as the cause; others see it as a potential panacea to the challenges of urban living. Of course, the introduction of new technologies usually leads to unanticipated, unforeseen, or unimagined results – both positive and negative by degrees. Technology inherently a human endeavour, is the search for new and better ways to do things (Coyne, 1999). The quest of technology is the search for solutions and innovations that will manage pressures and imbalances of modern life. The early fears of Meyrowitz (1985) who suggested the new digital technology of the Internet would result in a complete breakdown in our sense of place appear unfounded. Work by Hampton and Wellman (2003) found that the

Internet actually has the potential to transform and enhance 'neighbouring' between residents. This was evident through their surveys and fieldwork in Toronto of a 'wired suburb' with access to high-speed, 'always-on' Internet, and coupled with a local online discussion group. They found that the Internet, through local online discussion groups, had the capacity to increase neighbourly interaction and connection, strengthening weak social ties. A further field study by Humphreys (2008) looked at the impact of a specific mobile social network, *Dodgeball*, to examine the capacity of mobile information and communication technologies (mICT) to facilitate social congregation in public urban space. Through this study, evidence of the flow of information amongst users has the potential and to some extent already has, re-arranged our social spatial practice by bringing together friends and strangers in public places (Humphreys, 2008).

As a result of the widespread uptake of ICT technology, our public realm and public behaviours have shifted (Burke et al., 2006; Guzzetta & Bollens, 2003; Katz, 2006). Sense of place has not been lost as Meyrowizt (1985) predicted, but instead has been re-contextualised and re-interpreted through modern forms of communication.

Taking these social trends and shifts as a point of departure, this research investigates the issues generated by these changes and their impact on the professional practice of urban planners and creators of public places. It focuses on the human needs for congenial social interactions in place-based settings. Addressing the design of urban spaces where people can relax and socialise as part of a community in *third places* (Oldenburg, 1989). These *places* are defined as having a sense of belonging and connection for users. These *places* have a significant effect on the ability of a community to come together and provide a liveable environment (Gehl, 2006; Jacobs, 1961; Oldenburg, 1989). For this study, the research lens focuses on this reciprocal influence between *people, place and technology*, utilising libraries as a case study of *third places*.

By understanding the interactions between *people, place and technology,* collaborative or communicative planning policies approaches can be formulated more effectively. New ways of communication can be accounted for, while changing views on the interactions and responsibilities for the interconnection between *people, place and technology* are negotiated by community and government entities.

1.1.5 Collaborative planning theory and practice

Collaborative and/or communicative planning theories are now well established within the planning field (Healey, 2012). They form the basis of much planning reasoning and the rhetoric that underlies planning values. They are founded on principles of community involvement and engagement with planning issues and relate to the importance of stakeholder voices in the democratic process (Healey, 2003). Engaging and interesting the public in the matters of governance present their own challenges, where the public may present as dis-interested, disillusions or disconnected from the political processes of government (Dalgren 2009). The ICT turn in everyday communication has allowed for new and innovative ways to extend the process of reaching and engaging the public. New technologies are also affecting the way that communication is taking place. These changes need to be considered within the framework of the communicative planning process for it to be effective and relevant.

1.2 RESEARCH QUESTION

In an age of super modernity (Auge, 1995) and 'Everyware,' ubiquitous computing (Greenfield, 2006), how should public places be designed to encourage congenial, serendipitous interaction and social cohesion? This research centres on the exploration of how people use public places as third places – questioning how new media technologies will influence the way we experience and interact with public places.

The research is guided by the following three main research questions:

1. *What is **the role of digital technology in supporting urban planning and local government** for the purpose of design and creation of public places*? Digital technology refers to information and communication technologies (ICT) including the Internet and mobile information and communication technologies (mICT).
2. *How does, or could, the use of digital technology in public urban spaces support a sense of community, belonging and the creation of meaningful places?*
3. *How can the use of digitally networked interactions (ICT and mICT) be appropriated to support or enhance the way urban planners and local*

governments collaborate and work with their communities to create good public urban places?

The aim of this research project is to help urban planners and local governance authorities better understand how the development of digitally augmented network interactions impact on the social connection and development of a sense of place. As well as considering the potential for these technologies to support planning practice, to engage citizens and to consider how they affect the way cities are contextualised.

1.3 DEFINITIONS

For clarity, it is relevant to confirm the definition of key terms used throughout this thesis. Notably urban informatics and urban planning, both critical to the argument presented.

Urban Informatics 'is the study, design, and practice of urban experiences across different urban contexts that are created by new opportunities of real-time, ubiquitous technology and the augmentation that mediates the physical and digital layers of people networks and urban infrastructures' (Foth et al., 2011, p. 4).

Urban Planning is a diverse and eclectic field (Guzzetta & Bollens, 2003). It includes a wide range of expertise and skill in different aspects of city planning and development. There is often limited understanding of precisely what planners do amongst the wider community (Miller, Sahama, Grace, Wilson & Hefferan, 2011).

Urban planning, defined as the internal ordering of cities and place-making, demands complex and organised systems, as it encompasses the interplay between the needs of the city and its population (Adamson & Bunnett, 2002). Focusing on the built environment, the practice of planning involves decision making processes that centre on design, development, infrastructure, and services (Dredge & Coiacetto, 2006).

Urban Design 'is concerned with the arrangement, appearance and function of our suburbs, towns and cities. It is both a process and an outcome of creating localities in which people live, engage with each other, and engage with the physical place around them' (Department of Infrastructure and Transport, 2011, p.1).

Digital Technology, computers store and operate on a digital system. Digital systems use binary numbers (0 and 1) to represent either objects or an abstract concept. The transfer of information into these digit codes is called digitising. Digital technology refers to computer systems, processes and development of knowledge for the storage and transfer of this digitised (and thus codified) information (Conway, 2000).

Information and Communication Technology (ICT) is not an easy term to pin down as Zuppo (2011) concludes, it is used differently in various disciplines. The definition best suited to this thesis is taken from the *Information Technology Infrastructure Library* as quoted by Zuppo (2011, p. 16): 'technologies that provide access to information through telecommunications. It is similar to Information Technology, but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones [mobile phones], and other communication mediums.'

Mobile Information and Communication Technology (mICT) is the use of personal mobile forms of information and communication technology, such as mobile phones, computer tablets, net books (mini computers), and laptop computers.

Networked Interactions refer to the communications between members of a social network, in most cases facilitated through digital technologies or ICT and mICT.

Community are the 'networks of interpersonal ties that provide sociability, support, information, a sense of belonging and social identity' (Wellman, 2001b).

1.4 SIGNIFICANCE OF RESEARCH

The exponential population growth and urbanisation of the current age, puts pressure on planning systems, to manage the complexity of competing interests, within the context of rapid growth. Some of the interests competing for the resources of land and location, include: developers with economic imperatives; infrastructure providers; architects and designers managing physical form or design outcomes; general community seeking to maintain or create social vitality, liveability as well as equity; and environmental sustainability, to name a few. The differing, and specific

needs of these groups, can cause conflict and challenges, for urban planners and those responsible with the good governance of urban areas. The world's population continues to grow, and is projected to reach 8.9 billion people in 2050, an additional 57 million people per year (United Nations, 2012). Most of this growth will occur in urban areas. Urban areas are expected to increase in physical area with the equivalent of a city of one million people every 5 days (Fragkias & Seto, 2012). Australia's urban population is expected to grow from 19.8 million people in 2010 to 29.1 million people in 2050, an increase of 47 percent.

The issues facing urban planners, are intensified by sheer magnitude of the development that will be required. In light of this Eagle (2012), lists focus issues for urban development at this time, to include:

- economic revitialisation,
- smart and sustainable growth,
- affordable and stable housing,
- quality of life, and
- civic activity.

In light of global warming urban resilience can be added to this list as a critical issue currently facing society (Schmitt, 2013).

Juxtaposed to these growth phenomena, is the increased use of information and communication technology (ICT). It is reshaping how populations communicate, share information and interact (Castell & Linchuan, 2006). 130% of Australians own a mobile phone (notably there are more mobile phones than users with many people having 2 or more), and 60% of these are smart phones (ABS, 2011b). IHS iSuppli, a market research firm, predict that 'by the end of 2013, 54 percent of all phones globally will be smartphones' (Kim, 2012). Cisco forecasts indicate that by 2016, there will be nearly 18.9 billion network connections approximately 2.5 connections for each person on earth, — an increase from 10.3 billion in 2011 (Barnett, 2012).

At June 2012, there were 11 million Australian users on Facebook, also 11 million on Youtube, 2.1 million using LinkedIn, without considering other forms of social media. Social media, SMS and emails have become a social trend of this era. Annual Cisco VNI Forecasts expect the number of worldwide devices and connections to increase to near 19 Billion, this would mean doubling from 2011 to

2016 (Barnett, 2012). The increased use of social media and smart phones has had an impact on the way we connect and communicate with each other in profound ways.

The influence of digital technologies on urban planning is an emerging field of exploration. To date the focus of planning attention has been on the critical issues of the complex nature of the planning process and roles. However, the emerging phenomena of ICT connected communities (Bruns, 2011) and new means of communication, cannot be ignored. Recent experience in Germany saw the use of social media overturn political parties over planning matters. While, more dramatic political upheavals have been seen in Egypt and Syria since 2010, which were largely coordinated through ICT. This ability to inform and mobilise populations on issues, emphasises the power of ICT and its relevance to the matters of governance and civic engagement (Bruns, 2011). Planners cannot afford to be outside of these conversations and have much to gain for planning practice, through communication with community. Similarly over local government departments and governance entities need to be engaged with the discussion about how communities connect.

Within democratic societies, urban planning has experienced a communicative turn, where dimensions of collective debate and citizen involvement in the shaping of shared space and time, is valued and included in the development of planning policy and processes (Healey, 1992). In the communicative model or planning theory, the planner's role as a mediator amongst stakeholders is emphasised (Fainstein, 2000). With the expansion of ICT, understanding the shifting cultural practices around communication, as well as the affordances of ICT for planning is a pertinent issue. This thesis contributes to the discussion of ICT for urban planning practice, an area notably under-researched.

The second significant area of contribution for this research, is consideration of special places that enhance communication and community building, the *third place*. Public libraries are historically and symbolically significant as third places. They are currently experiencing pressures both economic and technological value, leaving them searching for new opportunities. These are created by the rise of new media and Internet services, which are threatening traditional print based information delivery and access. These challenge the role of libraries and their significance in an information age. This research contributes to the discussion of the future role of libraries as a physical place at the intersection of *people, place, and technology.*

1.5 INNOVATION OF RESEARCH

There are a number of innovative aspects to this research, firstly in its multifaceted approach. Secondly it utilises an urban informatics framework of *people, place and technology*, to reinterpret community involvement in planning and placemaking. Thirdly and similarly, it presents the library sector with an urban informatics frame of reference for its future positioning. Fourthly, urban acupuncture is presented as a neo-planning approach. Finally, the vitality of a hybrid network of social interactions and their value for public placemaking is presented.

1.5.1 A multifaceted approach

The multifaceted approach allows for an exploration of urban planning issues from perspectives beyond traditional paradigms and draws on the knowledge of relevant other disciplines in regards to the evolving and shifting relationship between people, place and technology. Other disciplines inform and provide insight in the literature review, the empirical evidence, and the conclusions.

1.5.2 Urban informatics and planning paradigms

The urban informatics framework has received little attention to date within the urban planning literature. Notable are works by Dave (2007), Evans-Cowley (2010), Odendaal (2006), and Shin & Shin (2012) who have drawn attention to the increased prominence and relationship of *people, place and technology*. Many questions about relationships and the value of digital technologies to urban planning remain unanswered. This thesis further advances the discussion of the relationship of people, place and technology and what this means for the practice of urban planning.

1.5.3 Urban informatics and public libraries as public places

The urban informatics perspective similarly offers public libraries an alternate framework for libraries to envisage their future. Capitalising on their strengths in literacy training, information brokering, and community engagement will help to reinvent their image and continue their purpose linking people and knowledge across entire communities. They are also working to counter the digital divide of those with versus those without access and knowledge of digital technologies.

1.5.4 Urban acupuncture to enliven and revitalise public urban spaces

Another research innovation is the repurposing of the term 'urban acupuncture' into the urban planning context. Acupuncture is the form of ancient Chinese medicine that uses strategically sequenced pins for the local stimulation of the body (or landscape) for a holistic, overall wellbeing effect. Previously, the term urban acupuncture has been used within architecture practice. Urban acupuncture works well to describe the interaction of people and place during the UR[BNE] Festival of 2012. Providing a series of stimuli for underutilised urban spaces, it worked on the premise not of one-off events but on the development of a sustained healing process influencing the culture of design, planning and use of public urban spaces within the Brisbane context.

1.5.5 Hybrid networked interactions and public urban space

The conclusions of this thesis present a discussion of a hybrid of physical and digital interactions that enliven place and add meaning and strength to communities. Analysis of place has been undertaken for both physical and virtual places but the evolution of hybrid places (both physical and digital) has received limited attention. Drawing attention to this element within the planning field presents a new and novel approach. It also builds on the notions of communicative planning as a theoretical basis of the importance of open channels of communication between government and communities.

1.6 THESIS OUTLINE

This thesis is presented as a series of published papers, consisting of a collection of writings on the research topic that have been published, or submitted for review and publication during the candidature as per the following guidelines in the QUT Manual of Policies and Procedures:

Appendix 9:

> *14.1.1 The Queensland University of Technology permits the presentation of theses for the degree of Doctor of Philosophy in the format of published and/or submitted papers, where such papers have been published, accepted*

or submitted during the period of candidature.

14.1.2 Papers submitted as a PhD thesis must be closely related in terms of subject matter and form a cohesive research narrative.

The 'thesis by publication' mode allowed for testing and presentation of ideas across a number of disciplines. By looking at the overall thesis across these disciplinary boundaries, the multiple facets of the research questions can be better illuminated than by using any single disciplinary lens. The diagram below shows the four key areas or disciplines targeted in each phase of the research.

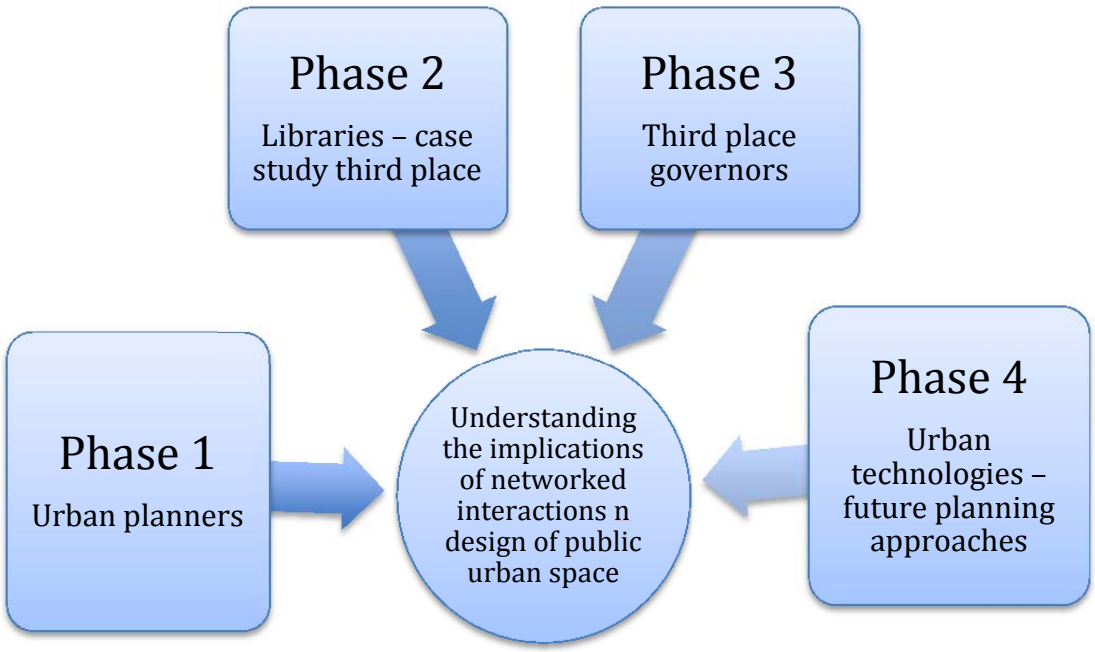


Figure 1.1: Multifaceted view of research

Each phase is presented as a research paper submitted to an academic journal, and also a findings chapter of the thesis. There are distinct data sets for each paper, combined they create a coherent research narrative. The narrative starts with the current planning practice and use of ICT, as depicted through the perceptions of planners in the field this is the **first phase**. Titled '***Integrating ICT into the Planning Process: Impacts, Opportunities and Challenges'*** this paper presents the urban planning perspective. Its key message centres on the fact that in spite of the development of ICT, and the changing patterns of people's behaviours relating to them, planning as a professional practice has been slow to respond to the

opportunities that new media and digital technology afford. Using qualitative interviews it draws on the experience of planning experts, thus highlighting the potential and barriers that affect the use of networked interactions in a planning context. Introducing a triad of connection points for planners to optimise and draw value from networked interactions, this paper marks the status quo of current planning practice and perceptions of the planning profession.

Having established that currently, there is limited knowledge and usage of ICT amongst planning professionals, a case study site was sought to investigate the opportunities and challenges of both technology innovation as well as new technological practices as they apply to an urban planning and design context. Libraries were chosen as an example of public places that epitomise the concept of a public realm (with ready access to the space by all) and an information rich environment. This **second phase** looks in detail at a public place (*third place*), which provides an example or case study of how ICT interactions affect planning and community – addressing the second research question. For this purpose, Concord Public Library was chosen, specifically as the case study site. After peer review, this paper was published in 2013 in the *Australian Library Journal*, 62(1), 27-39. Titled '***the continued relevance of the library as a third place for users and non-users of IT: The case of Canada Bay'*** it presents the perspective of library users. Qualitative interviews were supported by relevant quantitative data, observations and documents to build a case study of a local public library in the midst of a modern metropolitan city that is Sydney. The key message that emerged from the paper was the relevance of community-networked interactions (not necessarily digital networks) to the creation of 'places' embedded in rich meaning (2004). Establishing the library as a community hub and point of connectivity, it pointed to the opportunity for the library to digitally connect and support both the technology 'savvy' individual and the 'technophobe,' thus helping to bridge the gap of any emerging digital divide.

The **third phase** widens the research lens from the case study of libraries back to the bird's eye view of urban planning and the role of libraries in the context of place making and city planning. Drawing attention to the key role of ICT in the global economy, it builds a case for formal local area governance (local councils) to work with libraries or utilise libraries as a key factor in the glocalisation of knowledge and place for the creation of strong vibrant communities. Titled '***the local***

library bridging the digital and physical city: Opportunities for economic development', looks at the opportunity to place the library as a community hub, engagement space, and entrepreneurial incubator into the greater context of the city, city governance, and city planning. It presents the policy maker's and local government official's views and argues for libraries to be positioned as a centrepiece of a networked urban, knowledge economy. Libraries can capitalise on their position as existing community assets to build networks with vibrant community and economic links across urban localities. The paper also touches on the potential for ICT networks and infrastructure such as the National Broadband Network (of Australia) to facilitate a higher level of utilisation of library assets and community knowledge that build knowledge economies and support regions.

The **fourth phase** returns again to the direct planning perspective and the means of communication and development of networked interactions to design public places. Placemaking is central to this conversation of this fourth paper, as it considers planners and citizens interacting together to this end. Titled '***Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking',*** this paper moves on from the visions of a connected community established by the library themed case studies, and it considers an emerging planning practice that utilises networked connections to interact with urban places and re-create enlivened cities through action. Appropriating an architectural term: 'urban acupuncture,' it considers how social networked interactions can work for and with a new generation of urban planning and place-making professionals with a view to reinvigorate place and create meaningful relationships within urban settings.

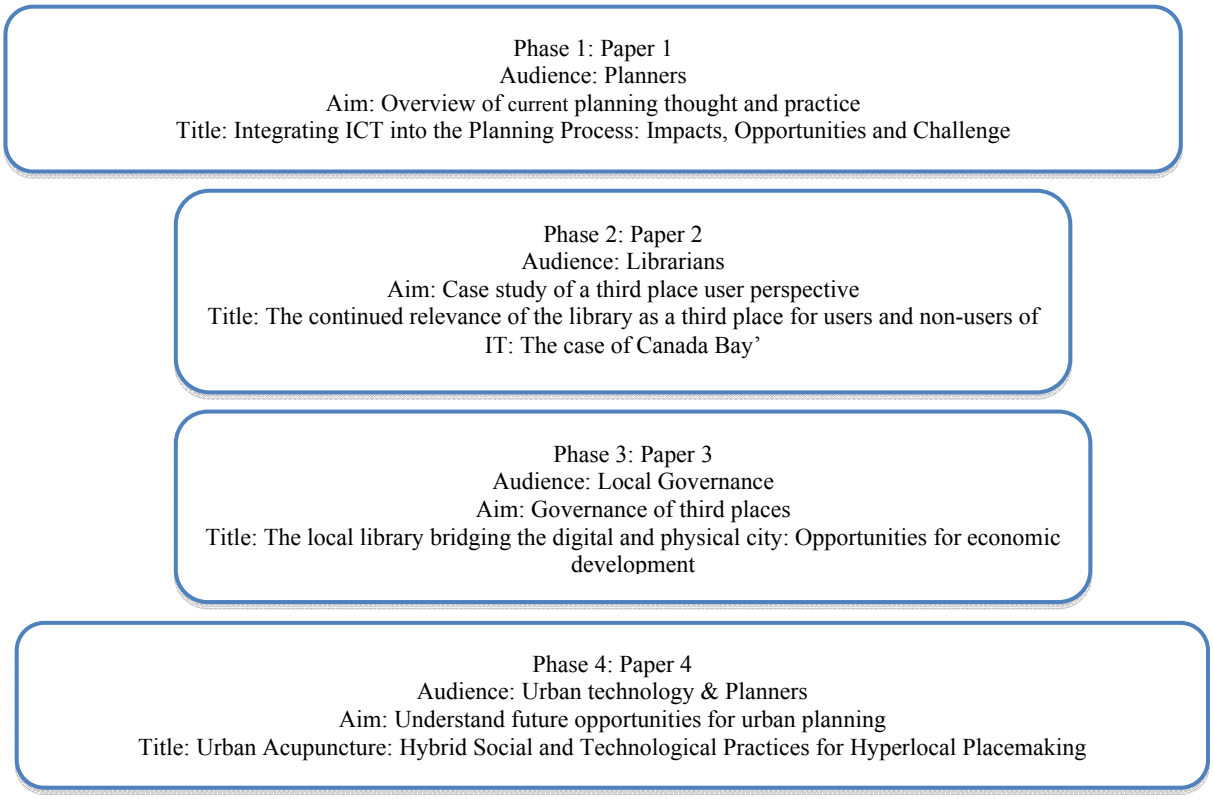


FIGURE 1.2 THE FOUR PHASES OF THIS RESEARCH

The diagram below demonstrates these four phases as they fit within the overall structure.

Section/ Target		Chapter/Paper Title	Paper/ Publication
1. Introduction			
2. Literature Review			
3. Methodology			
4. PHASE 1 **Urban Planners and Urban Informatics:** Setting the context for planners - Urban Planning Audience		*Integrating ICT into the planning process: Impacts, opportunities and challenges*	Paper 1 *Australian Planner* Published 2013
Library Case Study of Third Place	**5. PHASE 2** **The experience of libraries as an example third place** Library Audience	*The Continuing Relevance of the Library as a Third Place for Users and Non-Users of IT: The Case of Canada Bay*	Paper 2 *Australian Library Journal* Published 2013
	6. PHASE 3 **Governing Third Place – Library example** Governance Audience	*The local library bridging the digital and physical city: Opportunities for economic development*	Paper 3 *Commonwealth Journal of Local Governance* Accepted for May 2014
7. PHASE 4 **Realisation of placemaking through ICT** Urban Technology Audience		*Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking*	Paper 4 *Journal of Urban Technology* Accepted 2014
8. Discussion			
9. Conclusions			

Table 1.1: Thesis Structure

The four phases are prefaced with the introductory section (preamble) that presents the purpose, scope and research questions of the work, along with the foundation of existing theory and knowledge in the literature review. Together, they set the scene and context for the research. The main part of the thesis' empirical analysis is embedded in four publications.

The final chapters of discussion and conclusion integrate the findings of the four papers and their individual perspectives by revisiting the research questions and the contribution of the individual papers to address them. These chapters include summaries of the main contribution of each paper to their respective discipline areas, and to the research as an integral whole, including practical implications for its application. Further, this chapter also presents the unanswered questions and the potential directions for exploration or research beyond this work. This thesis acknowledges that planning is a complex and eclectic practice, and to suggest networked interactions are the key to all the issues of public space design would be naïve. However, it is argued that within a communicative planning framework digital technology of this age offers distinct opportunities to consider new planning approaches and embrace networked interactions for the design of public urban spaces.

Chapter 2: Literature Review

The development of digital technologies in the modern city is evolving. It affects the ways we understand and interact with the physical space of the city. The overlay of pervasive digital technologies and increasingly networked social experiences of the city are integral to this changing relationship. As a result, the way communities interact with planning and placemaking will be affected. Expectations and the practice of urban planning will benefit by an expanded perspective that embraces new technologies and the networked interactions they afford.

2.1 PEOPLE PLACE TECHNOLOGY- CONTEXT AND THEORETICAL FRAMING

There are three disciplines that inform this research: urban sociology and cultural geography, the *PEOPLE* element, urban planning and urban design, centered on understanding *PLACE*, and human-computer interaction research, or *TECHNOLOGY*. The growing interest at the intersection of these three areas for academic research has been defined as Urban Informatics (Foth, Choi & Satchell, 2011). The literature review for this research will investigate each of the three areas in light of the research problem and its three main aims.

The following diagram illustrates the interrelationships and the research space created between them**.**

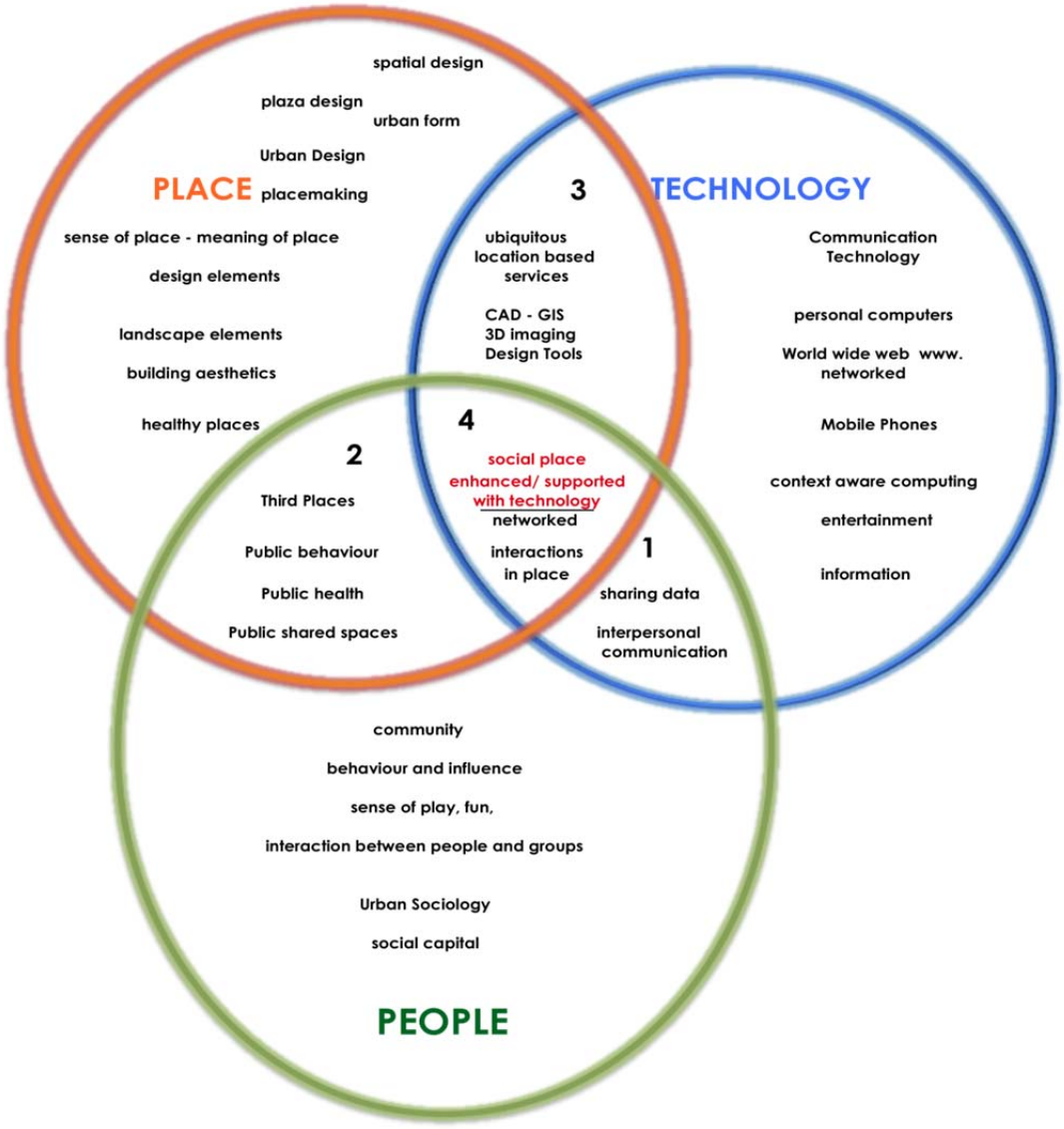


Figure 2.1 Diagram of Research Area

The literature review will establish the body of knowledge that underpins this research project by focusing on the following four key areas. To establish why the study is relevant it will look at ***2.2 the need for public space within the complexity of modern life.*** In section ***2.3*** it will consider ***public space by accident or design***. This section will define the concept of place and specifically third place with its relevance for communities. The third section will examine digital social networks and postmodern solutions as a ***2.4 hybrid communication, giving collective voice to design re-creation and engagement of public place***. This section will also consider

the role of communication for planning and for generating community engagement in place development**.** The final section of the literature review will position this research by **2.6** ***filling the gap between people, place and technology*** and looking at social places enhanced and supported by network technologies.

The following Table 2.1 sets out the chronology of the literature pertinent to urban informatics assisting in the alignment of discussion across the three discipline areas. It is noted that some works cross the boundaries of discipline areas. The ubiquitous nature of digital technologies involves its use in almost every aspect and function urban environments (Greenfield, 2006). Its pervasiveness has blurred the previously marked boundaries between disciplines, redefining their meaning for a digital age (Dave, 2007).

It is also noted that this is not meant to be a definitive list of developing theories. Rather, a contextual roadmap denoting some key features to be discussed in more depth throughout this literature review. In the technology column of the table, key technological developments are provided, these particularly relate to the development of mobile phones, ICT and the Internet. The timing of these developments is critical to the development of theory and understanding of their implications, for instance Meyrowitz (1985) was developing theory about the impact of home computing, before digital cell phones were invented, much less the smart phones that followed, Could he have envisaged that the mobility of ICT would reconceptualise access to information prior to this emerging phenomena. Similarly, Auge (1995) spoke of non-places, before many people were using mobile ICT to work and connect to family during transit and waiting time, a phenomena that altered dimensions of presence and connection. More consideration of each of these elements will be given in following discussion.

Decade	Technology	People	Place/ Planning
1960	*1964 First dial-up car phones*	Behaviour in Public Places **(Goffman, 1963)**	Image of the City **(Lynch, 1960)** Life & Death of Great American Cities **(Jacobs, 1961)**
1970	*1973 First personal handset invented* *1979 First commercial cellular network*		Defining Place **(Tuan, 1977)**
1980	*1981 BINET initiated – precursor to Internet* *1984 Domain name system established*	Theory of Structuration **(Giddens, 1986)**	
	No sense of place (Meyrowitz, 1985)	Social capital - creation of human capital (Coleman, 1988)	
	By the end of 1987 there were 10 000 Internet hosts. *By 1989 number of internet hosts 100 000*	Public sphere **(Habermas, 1989)**	
		Social place & Symbolic power **(Bourdieu, 1989)**	
1990	*1990 First digital cellular phone call*	Production of Space **(Lefebvre, 1991)**	
	1992 Launch of world wide web *1993 Introduction of text messaging* *1996 Nokia merge mobile phone and PDA*		Tomorrow's Metropolis Virtualisation (Droege, 1995)
	1998 Introduction of Bluetooth technology	Non-places **(Auge, 1995)**	
	City of Bits **(Mitchell 1995)** e-topia **(Mitchell, 1999)**		Intelligent responsive architecture (Kroner, 1997) End of Geography or explosion of place (Graham, 1998)
	Technoromanticism (Coyne, 1999)	Postmetropolis **(Soja, 1999)**	
	Living in a networked world (Wellman & Hampton, 1999)		Relational Concepts of Space & Place (Graham & Healey, 1999)
	Public Space, Urban Space and Electronic Space (Crang, 2000)		
2000	*2000 Introduction of smart phone*	Rise of the Networked Society (**Castells, 2000)**	
	Physical space and cyber space (Wellman, 2001b)	Quality of Life (Dissart & Deller, 2000)	
	2002 Phone cameras		
	Digital Ground (McCullough, 2004)	The Intranet & local community (Arnold, Gibbs & Wright, 2003)	The Library as Place (Ranseen, 2002)
	Spaces, spatiality and technology (Davenport & Turner, 2005)		
		Social relations & urban forms (Tonkiss, 2005)	Digital Ground (McCullough, 2004) Introduction to Place (Cresswell, 2004)
	Citizens as Sensors (Goodchild, 2006)		
	Meaning of localism in global world (Strassolodo, 2005)		
		Life between buildings using public space (Gehl, 2006)	
	2007 Apple releases iPhone		
	Community Informatics -Social Capital (Simpson, 2005)		
	Information Places (Willis & Geelhaar, 2009)	Naked City (Zukin, 2009)	
	Emergent media technologies & new urban spaces (Chamberlain, 2009)	Speed is contagious (Eriksen, 2006)	
	Mobilities **(Urry, 2007)**		
2010	New media & urban environments (Brighenti, 2010)	Participatory urbanism (Paulos, Honicky & Hooker, 2009)	
	Digital to Ubiquitous cities (Anthopoulos & Fitsilis, 2010)		

Decade	Technology	People	Place/ Planning
	Mobile social networks (de Souza e Silva & Frith, 2010)		
	Reframing Public Space - Digital Mobilization (Molnár, 2010)		
	Rise of Social Media (Laleh, 2010)		Glurbanisation (Matusitz, 2010)
		Placemaking for communities (Project for Public Spaces, 2011)	
	Distributed citizen participation (Bruns, 2011)		
		Social Cities (Kelly et al., 2012)	
	Situated technology – micro public places (Frei & Böhlen, 2010)		
Urban Informatics Defining urban informatics (Foth et al.) Towards digitally integrated urban spaces (Riether, 2011) Technology innovations and complex systems in Cities (Dodgson & Gann, 2011) Networks, resources and agencies: On the character & production of enabling places (Duff, 2011) Digital Cities: The challenges for the future (Wachter, 2012) Space, sociality, and pervasive computing (Dave, 2007)			
Planning in the real time city (Evans-Cowley, 2010a, 2010b; Fernback & Shaffer, 2010; Gordon & Manosevitch, 2010)			
Understanding Implications of Networked Interactions on the Design of Public Urban Spaces			

Table 2.1: Roadmap of urban informatics and urban planning: theory and understanding

2.2 THE NEED FOR PUBLIC PLACES WITHIN THE COMPLEXITIES OF MODERN LIFE

We live in a time that is experiencing 'dizzying velocity of technological change' (McQuire, 2008 p.3). Not only are technologies changing, but also the ways people interact, socialise and communicate (Bell, 2004; Calabrese, Smoreda, Blondel & Ratti, 2011; Castell & Linchuan, 2006; Castells, 2000). As the world has crossed the threshold of more than 50% of the population living in cities (United Nations, 2012), urbanisation and the challenges it presents are a real issue for humanity. The proximity of urbanism challenges the capacity of the population and individual to negotiate difference of class, gender, culture and race (Amin, 2006). In order to build tolerance and inclusive societies Oldenburg (1989) and Jacobs (1961) both emphasized the value of the contingent encounters both with familiar community and with strangers. In this way the street or public place acts as a point of interaction for a diverse range of people, to maintain a productive and empathetic connection with strangers.

Life without community, and the development of urban forms that fail to acknowledge and provide a setting for public life, create stagnant places (Oldenburg, 1989). Social fraternity is lost in the life governed by the routine of 'home to work and back again' routine. Oldenburg emphasizes that social wellbeing and psychological health are dependent upon a social interaction beyond home and work that is community. He presents the notion of third place, that is a place that can foster this social interaction, and acknowledges the importance of these places for the individual and the broader community. This research is based on the premise that indeed these public spaces are vital to people's wellbeing and the vitality of cities.

Giddens' theory of 'structuration' can provide some insight into the way social systems are established, they are characterised by the social relationships that embody them (Giddens, 1986). Giddens suggests that social systems are formed as 'an active constituting process, accomplished by, and consisting in, the doings of active subjects' (Giddens, 1993, p. 121). In this way agents (the group or individuals) are active participants in the social system. Interaction, an agent's activity and the encounters with each other, in the social system are defined and then redefined within time-space relationships (Giddens, 1986).

Interactions within communities and social relationships for the majority of modern society are situated within urban settings, which are complex by nature

(Healey, 2007). The establishment of human interactions on a variety of levels is the pulse of a community. They contribute to the effective and positive functioning of specific places impacting on the livability of communities.

Other changes such as globalization, the diversity of a multicultural city, the changes to transit and work patterns, shift the modern perspective. Social change is evident throughout the urban environment, affecting expectations and lifestyle patterns (Amin, 2006). Social relationships remain fundamental to the perception of livability and connection with places, as relationships are often linked to the spaces in which they occur. If, within the globalised context, we disengage from our local context and withdraw into a virtual space of sameness and acceptance, then the stultification of the city follows, along with distrust and fear (Jacobs). Physical encounters not only with friends, but also with strangers who become familiar 'regulars' and sharers of place, are needed to promote and develop glocalisation (Guzzetta & Bollens, 2003; Robertson, 1995). Glocalisation considers the global issues of sustainability on the local scale (Wellman, 2002). These actions are contingent on collaborative efforts, which shift within a networked society to become horizontal communications between peers (Castells, 2000). So the promotion of places that support the extension of social relationships and convivial interactions between locals can support and encourage sustainability efforts.

Spaces that we think of in terms of the public realm are undergoing significant change and a shift in terms of their historic value to society (Burke et al., 2006; Guzzetta & Bollens, 2003; Katz, 2006). Understanding the boundaries created by information technologies is necessary if designing cities is to empower and promote a public urban life (Frei & Böhlen, 2010). There are new and exciting opportunities afforded to us by the development of 'new media' and advancing social communication technologies. New media is defined as communication technologies that are both 'networked and digital' as contrasted to 'old media: namely mass broadcasting media, radio, television, and newspaper' (Hearn, Tacchi, Foth & Lennie, 2009 p.9). New media forms are more interactive and spontaneous and allow for a much broader community input and ownership of content. This new media and social networking technology present new opportunities. Opportunities to change the behaviours and relationships people have with each other, with governance frameworks and with public places.

Augé (1995) spoke of the public's changing relationship with places. He argues that place requires three key elements: relational context, historic context, and identity. Theoretically, without these elements a space must be a non-place. He goes on to define many such non-places. Augé's hypothesis raises a concern for the planner, the citizen and the community that the 'non-places are a real measure of our time' (p. 65). Theorists like Gehl (2006) have raised concerns over the development of non-places within cities and urban areas, which have resulted in the subsequent loss of community, serendipity and convivial interactions. However, the broad use of the mobile phone has already seen changing patterns of behaviour and a shifting relationship between time and place (Geser, 2004; Hampton & Gupta, 2008a). The ability to reach one another via mobile phone anytime and anywhere has resulted in communication becoming abstracted from physical space (Hulme & Truch, 2006). The spaces in between home and work and social activity, 'interspaces', have become more significant in relationships (Hulme & Truch, 2006). These interspaces are used for communicating with work colleagues, business contacts, close acquaintances, family and friends. The affordances of mobile communications means that the points of contact, previously fixed, have become more fluid and the boundaries redefined as mobile and constant (Hulme & Truch, 2006).

2.3 PUBLIC PLACE BY ACCIDENT OR DESIGN

2.3.1 The meaning of place

In order to define place the distinction between place and space must be clear, for while they are distinct, they are entwined concepts that cannot be fully appreciated in isolation from each other (Tuan, 1977). They can be distinguished in that the structural and geometric qualities refer to the *space*, and the dimensions of lived experience define the *place* (Harrison & Dorrish, 1996; Tuan, 1977). Place therefore includes the interaction and use of space.

The process of place making within physical space is complex, emotional, experienced, and is, as individually diverse as the people who inhabit the space. Geographic location, architecture and urban design, culture and governance are all part of the cocktail of elements influencing the relationship between people and place. The value we endow on places is developed through a knowledge and

experience of that place (Tuan, 1977, p. 6). Describing space as movement, Tuan makes the analogy, if space is the movement then place is the pause. It is when we take the time to stop and pause, that this space we are moving through, can gain meaning and relevance to us, hence transforming into place. There is a close relationship between place and space, place from a phenomenological perspective is a territory of meaning or a way people connect to their physical world (Relph, 2001). The relationship between geographic spatiality, the development of a mental connection, or layers of meaning for the individual and the community to create place, are the building blocks of place.

Using qualitative research based in New York, Manzo's (2005) revealed that there is a diversity and richness of people's emotional relationships to places: these may be either positive or negative. Findings, drawn from 40 in-depth interviews, highlighted that complex and multifaceted relationships develop between people and places, and these places are fundamentally part of their lives. She discovered that meaningful places were not always organized around residences or homes, and it was not the place alone but the experiences within places that make them significant. Tuan also notes that part of the notion of place is knowledge or experience of the place, including 'sensorimotor, tactile, visual and conceptual understandings of place' (Tuan, 1977).

If experience and knowledge are fundamental to the making of 'place' what role does a social or collaborative experience play in the notion of place? Lefebvre (2001) devotes a great deal of attention to the thought that space embodies social relationships. There are two types of spaces, those naturally occurring 'absolute space' and then the more complex socially constructed spaces. Further, there are two aspects to social spaces, the collective experiences that build the sense of place and the need for 'social', to have a place in which to be. These social spaces of Lefebvre are synonymous with the definition of place as, somewhere endowed with relationships, knowledge, experience and meaning. The 'interweaving of spatiality and sociality' (Soja, 1999, p. 8) or 'socio-spatial dialectics' underpins the contextualization and spatialisation of social life. Spatial practices are closely tied to the concrete forms and the patterns of life that evolve in the development of specific urban form (Soja, 1999). On the basis of this premise urban design influences the social spatialisation of the city and how city design should be informed by evolving social practice. This research will explore one aspect of this socio-spatial dialectics to

better understand how in the context of the age of new media and web-based social networking, social relationships and physical places interrelate and are interdependent.

The concept of place is closely tied to experience, more than the architecture or urban forms that define its physical boundaries. Place is local and involves a particular experience or set of experiences for that locality (Brewer & Dourish, 2008), place is about those elements that distinguish or differentiate one place from another, and how boundaries and transitions are encountered. So the relevance of place comes through a relationship between physical affordance and cultural meaning (Brewer & Dourish, 2008).

The experiences of space will determine the connection and emotional relationship that people have with space, positive, negative or ambivalent (Manzo, 2005). In particular, feelings of belonging, safety, familiarity, personal history, and stories are what make a place familiar, help us belong, and create a positive connection with space. This relationship changes a space, to a place. The process of creating places is a shared one, that involves not only architecture and urban form, but also the relationships of the inhabitants to the space as architecturally defined and the elements of culture and interaction that they bring to a space. The definition of any individual place therefore is evolving and is in a constant 'state of play'. Subtle shifts in behaviour, cultural views and usage will change the nature of a place and its' meaning, layering the historical place with new meaning. Technological changes and changes to social structure, as they impact patterns of behaviour, will also impact on the meaning and experiential relationships that define place.

Media has always impacted on the relationships among places, whether through the sharing of information in a place or the social relationship developed because of the media in the place, for example the sharing of news in the street, via word of mouth or newspapers (Meyrowitz, 1985). Meyrowtiz further suggests that digital media takes this relationship even further and causes a disconnection or dissociation of physical space and social place, as people moved to their offices or homes to connect with the world. The removal of the need to co-locate is a significant factor in this breakdown of relationship between people and place, as digital technologies redefine social interaction without being determined by the physical being, for instance a persona developed through blogging, or gaming. Given that this work was written in 1985 before the widespread use of mobile ICT, has this relationship

adjusted again as new media and technology lead the way in social responses and interactions of people and place?

Not only does place continue to matter, but there is also a dichotomy of physical versus virtual (Gordon & de Souza e Silva, 2011). The new urban typology arises of place-based communities and virtual communities (Mitchell, 2004). Place-based communities are primarily held together by modes of transportation while virtual communities are held together with electronic connections. The further development of this typology is the hybrid community utilising both physical and virtual environments with a multiplicity of networks and overlays (Mitchell, 2004). It is within this hybrid space that cities are functioning. Urban planning needs to meet challenges and opportunities that this new concept of place presents (Graham & Healey, 1999).

2.3.2 Public spaces, social places

The metaphor of public space providing a stage for the drama of communal life paints a vivid picture of social encounters and exchange (Carr, 1992). Public spaces have a variety of functions within the context of an urban environment. They provide channels of movement, nodes of interaction and exchange, as well as a common ground for work, play and relaxation. It is the experience of chance, casual encounters that bind people together. In this way the public place can add meaning and power to people's lives (Carr, 1992). There is a link between public places in this capacity and the quality of life an urban environment can offer its inhabitants. Public spaces provide a refuge or break from the intensity of urban living, of intense relationships of home or time pressures and power structures of the work environment (Oldenburg, 1989). They provide a mixing place for a diverse population where through physical sharing of space, familiarity can work to breakdown the distrust of the unknown 'other', reducing perceptions of danger and fear, while creating a harmonious co-existence between a variety of cultures and social backgrounds.

Public places like sidewalks are the social life of the city (Jacobs, 1961). The way they bring people together who do not share close relationships, is one of their great benefits. This superficial level of greeting and knowing each other is part of

sharing the city, a vital interaction for the social health of the city. If instead, 'the only acquaintances in life are confined to private life then the city becomes stultified' (Jacobs, 1961). The public place acts as a release from expectation, inviting new ways of looking at the world and life in general.

Public spaces are also the stage for new, shared stories, a place for common history, the spaces of emerging cultural identity as it shifts and changes with each new era. Vibrant cities need vibrant public places that encourage and allow for an informal interaction of local urban inhabitants to create cultural interchange. Cities need public places that allow for everyday interactions and a sense of belonging.

In the work Social Interactions in Urban Public Places, Holland, et al. (2007) discuss the use of public spaces through an investigation of ten case studies and discovered that the impact of controlling or managing the behaviour of the public within those spaces had an impact on the social and local fabric of public life, while also establishing that the public enjoys the social aspect of the familiar space and the possibility of the unexpected.

The six key findings of their research were: Firstly, that usage of public space was different for different age groups and for different reasons.

Secondly, use was not only for the 'social function of public spaces' in some cases, 'some people use them for privacy or to support a sense of territorial ownership' – this particularly applies to groups of young people and marginalised groups.

The third finding was, places acquire reputations (fairly or unfairly) that persist and affect whether and how people use them. But 'people are drawn to spaces that offer interest, stimulation, comfort and amenity'. These aspects can positively change reputation and overcome the physical barriers experienced by some users. The fourth, that management can 'enable a broader spectrum of the community to use public spaces by providing and maintaining basic comfort amenities such as seating, lighting, and toilets.' The fifth, is that regulatory approaches range from strong intervention to light touch, reflecting different emphases on security and reputation. But there is also a need for the unregulated spaces. Finally, issues are not solved by moving on people and activities that are deemed undesirable or out of place – this merely moves the perceived problem somewhere else and discourages integration'. The researchers conclude that public spaces retain a democratic and civic function, alongside commercially driven uses. They suggest that policy-makers can support

this by encouraging diversity and harnessing people's tendency to 'self-regulate' to avoid conflict: over-regulated environments are not conducive to vibrancy and integration.

Emphasis is added to highlight some of the key points that serve to inform this research. These key points are summarized as: the variety of functions of public spaces; the need for points of interest, stimulation, comfort and amenity; integration of a broad spectrum of users; balanced management and regulation; and provision for unregulated spaces to accommodate vibrancy and integration. Noting the variety of functions of public spaces, the role of the social space is to be considered in more detail (Holland et al., 2007).

2.3.3 The 'third' place

There is a type of public place that functions specifically, if not exclusively, as a social place, where people relax, hangout and connect with the broader community, their local community. These social places are known as 'third places' (Oldenburg, 1989). These third places support healthy communities, the democratic process and the individual's sense of community and human connection. These places are an incubator for the germination of ideas and growth of community. Third places are an ideal starting point for 'glocalisation' to support sustainability of cities and human interactions, making a strong case for the relevance of these spaces within people's lives. Oldenburg highlights that privatisation of life through personal entertainment has seen a focus on home and work dominating the everyday life of the modern citizen. The suburban housing estate model that still proliferates in many modern cities is one of separateness. It is on this understanding of the social and community benefits of these places that this research builds. This research considers the role of third places in everyday life, and the responsibility of planners, urban designers and urban decision makers to create environments that can support and enhance this relationship, while seeking to inform and critique the future direction of the design of these spaces.

Public libraries display significant characteristics of third places. Oldenburg (1989) outlines eight elements as specific identifiers of third places. They include: neutrality, social equality, space for conversation, qualities of accessibility and

accommodating nature, regular visitors, non-pretentious, playful and allowing for a sense of belonging. Libraries are places where people meet, socialise, and connect to community (Aabø & Audunson, 2012; Buschman & Leckie, 2007). There is a growing body of knowledge about the shifting role of public libraries as they play an increasing role as social and community places (Bryson, Usherwood & Proctor, 2003; Hayes & Morris, 2005; Morris, 2005). People are deliberately seeking out libraries as places for social connection (Bryson et al., 2003), for leisure (Hayes & Morris, 2005), for learning (Hayes & Morris, 2005), even habitat and refuge (Lincoln, 2002), and as a place to give back to the community (Fidishun, 2007). Public libraries are generally places that offer free services and access to the whole community. In this capacity they build social capital through trust and mixing of a diverse range of community (Vårheim, 2007a).

The public library (as representative of the third place) is in fact a place where the front stage of life or public persona is developed. Giddens (1977) explored this notion of a front region or a stage where we act out publically versus a private place where we prepare, seek refuge and have a solitary space.

These patterns of behaviour have become evident in the public space and an understanding of these patterns informs the designer or planner in creating an engaging, usable, public space that meets the needs of the users and promotes positive interactions, fulfilling its function as a social living room. In Oldenburg's discussion of third place, this café space is a key social meeting place, a concept picked up in the early development of Starbucks coffee stores. Other theorist including Henry Lefebvre (first published in 1974 2001) and Jane Jacobs focus their discussions on urban environments and particularly streetscape and public places (Jacobs, 1961), likewise were Allan B. Jacobs analysis of Great Streets (1993) and Jan Gehl's work Places for People (1994) and Life Between Buildings (2006). In fact, the field of planning has a highly developed discussion on the elements that combine to make a good public place with the works of Whyte (1980), Marcus and Francis (1998) and Woolley (2003), amongst others. The acceptance of the role of social interactions as vital to the success of public places is widespread in the urban planning field.

Shaftoe's (2008) notes that the design and form of public places are directly shaped by urban designers and landscapers. The nature of that design will impose a level of functionality on the users. The form of these spaces will influence the

behaviour patterns and the subsequent relationships of people with these spaces and each other. The designer needs to be informed by the users' in terms of the patterns of behaviour and social requirements. The planner benefits from understanding the motivations and values that these places for the individual and community, acknowledging the ways in which these values may be changing in light of new and developing technologies.

The literature leads to an understanding of the vital need for public place to support social connection in order to have a good quality of life. Quality of life and livability are both challenging concepts to measure. They are often defined in terms of a number of psychological factors; without delving too deeply into the discipline of psychology, community researcher Adams suggests that to understand quality of life of modern societies, are in part determined by the strength and types of local social bonds (Adams, 1992). How positively people view their community is aligned with the sense of social integration people have. In turn social integration promoted good psychological health. Jacobs (1961) is quoted as the first to define the measure of this social integration as 'social capital' that is captured within the neighbourhood networks of the city and built within a context of continuity.

The social and cultural benefits of the public realm are well established within the literature and planning guides. The relationship between the planner or designer of places and the end users needs are key to the functionality of these places. There are however, specific elements that effect how well a place will function within a social context. This research will explore those relationships between behaviour and use of place, so that design elements can be matched to these functional, social requirements.

2.4 HYBRID COMMUNICATION: A COLLECTIVE VOICE TO ACTION DESIGN, RE-CREATION AND ENGAGEMENT WITH PLACE

The Internet and mobile ICT have been responsible for major changes in the way people communicate, socialise and spend time. Lentini and Decortis (2010) suggest that for digital natives cyberspace is an integral part of their understanding and experience of space (Lentini & Decortis, 2010). The Internet is also seen to have shifted the sense of identity, and provided new ways to create a public persona (Brighenti, 2010). Turkle (2011) suggests that the expectations of technology and of

ourselves have shifted with the increased mobility of the Internet. Turkle's longitudinal ethnographic work lead her to the conclusion that our relationships and ways of thinking about each other are defined by connectivity, that while tethered by our ICT devices we are able to hide from each other or create the persona desired.

Spaces themselves are rendered meaningful through the actions of people in them (Brewer & Dourish, 2008) providing the lens of practice for the development of ICT. This lens equally applies for the planner. The creation of 'virtual spaces' that transcend and overlay the physical or 'real' spaces has redefined the interpretations of culture and place. The relationship between increased mobility and digital technology has altered perspectives of the everyday world (Brewer & Dourish, 2008). Interpreting physical spaces and understanding the 'paths of wear' created in the context of these relationships, can assist in the interpretation of spaces for the benefit of good design. Technology is now embedded within the physical world and accessible in real time and place, this fact generates a new way of knowing the environment and supports an experience of place (Robinson, Rittenbruch, Foth, Filonik & Viller, 2012).

Communication and information technologies have developed to a point that they have an influence on everyday life and the built environment (Aurigi & De Cindio, 2008; Foth & Sanders, 2008). While the area of human-computer interaction is a relatively new discipline, (especially compared with sociology and planning disciplines of study), the potential for research into the inter-relationships of people, place and technology is growing in relevance for the development of modern urban environments.

ICT can facilitate the social experience in physical spaces. Paay and Kjeldskov's (2007) set out to develop and observe a mobile phone prototype that would facilitate sociality in urban spaces by (1) allowing people to share places, (2) indexing to places, and (3) augmenting places. The study focused on understanding both the social and physical context of situated interactions, especially the relationship between the context and users' actions. Their work investigated how the physical and social affordances of a place, influence the situated interactions that occur there, including the relationship between people, technology and social interactions.

Based in Federation Square in Melbourne, the rapid ethnographic method included contextual interviews and interactive observations. The study deployed an ICT prototype system that was context aware and capable of tracking location,

friends, with the ability to share this information. They discovered that there were three key concepts of knowledge, situation and motivation that explain how people experience place. Knowledge, through experience or through shared information, is a part of how we socialise and interact within the context of a space. Their findings showed, that what we know of a place aids our interpretation and understanding of the world. Situation relates to our sociality, whether with friends or in the presence of strangers. Often we may just want to be in proximity of others without conversation or any direct connection to those around. Motivation relates to the reflections of current experiences, and a preliminary assessment of what is happening in a place before entering. People want to know if there was anything new in a place and what was happening there. Sometimes people wanted to know what was going on in a place without actually taking part in the activity.

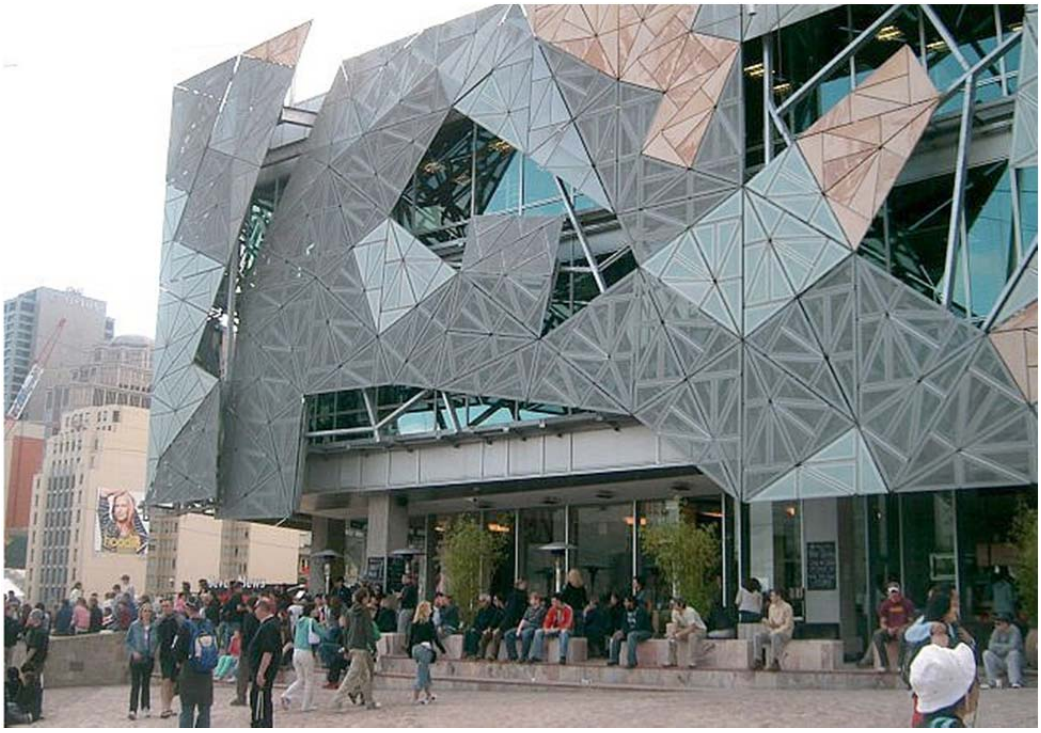


Photo source: Flickr Edwin.11 used under creative commons

Figure 2.2 Federation Square, Melbourne

The understanding of the users perceptions of spatiality and social relationships in the context of ICT helps to establish lines of enquiry for the research project. The same elements of human behaviour, that is the concepts of knowledge, situation and motivation all have bearing on the elements that relate to the physical place.

We have moved from mainframes to personal computing in the form of ubiquitous computing, that is assimilated into everyday life (e.g., the widespread

uptake and utilization of mobile phones, laptops, netbooks and tablets). This new form of computing merges information technology and communication in new and exciting ways. What is of great interest is the way that the development of communication technology has meant that a form of ICT is almost a necessary accessory, ever present and accessible, an expectation rather than a marvel, ubiquitous to everyday life.

Through this developing medium, the way we communicate, supply and receive information - and our expectations of communication - establishes new patterns of behaviour and interaction. Protocols of public behaviour along with the needs and motivations of phone use, are constantly being redefined (Turner et al. 2008). Discussing the acceptable public behaviours as well as the annoying behaviours of mobile phone users the research by Turner et al. (2008) was based on a survey of 184 young adults to explore the attitudes and acceptable behaviours about mobile phone. The study exposed some behavioural responses to the use of mobile phones in public such as the application of public restrictions, the desire to remain personally contactable and the social usability or anxiety regarding phone use in the presence of others. The emotional attachments and new behavioural patterns that have emerged in relation to the usage of mobile phones in social settings help to contextualise the research. If the physical design of urban setting is to accommodate or acknowledge these behaviours they must firstly be noted and understood.

For HCI research, the focus has become looking at ways that communication technologies could enhance and add value, channeling positive behaviours. Paay (2005) a ubiquitous digital application designer considered how pervasive computing could augment social interactions in the built environment. This work (as outlined above) offers an insightful perspective for the urban planner in terms of public behaviour and public perceptions of places in relation to HCI.

Further research investigating these areas includes that of Bell and Dourish (Bell, 2004). Their research is considered the two aspects of the practical and the cultural organization of space as well as the influence of ubiquitous computing both on and by the social organization of spaces. The close link with the area of investigation is apparent and their work provides an insight into the area of interest.

Hampton and Gupta (2008b) examine the social life of wireless public urban spaces through the observation of seven sites including, parks, plazas and markets, in Boston and Seattle USA. These observations were supported with surveys of laptop

users from within those spaces. The study found two distinctly variant types of users: the ‘true mobiles’ and the ‘placemakers’ each offering a divergent future for ICT usage in public areas. The ‘true mobile’ moves to the café to work but it is a form of escape and they did not seek to engage with other inhabitants of the space, they create a ‘public privatism’, drawing their connections with people who are co-present but not co-located, their use of public WiFi was a means of escape from ‘other’ places such as home or work. Conversely the ‘placemaker’ is utilising the public access WiFi to embrace the location, to connect with others within the place, in previous work Hampton and Wellman (2003) refer to this as glocalisation.

It was noted in the study that the private and semi-private nature of places made a significant difference to the use of WiFi. It was noted that privatised locations (generally cafés) would adjust their environments to limit the lingering laptop user, for example: removing power outlets; or limiting WiFi access during busy hours; reducing table space; establishing rules for toilet facilities; and actively asking ‘wireless squatters’ if they wanted something. Their concern being that they would take away space from the legitimate customer. Privatisation of these ‘third places’ was seen to limit the potential for the wireless access to encourage social interactions. The paper calls for further research to reconsider the design of public urban spaces ‘in light of the unique requirements of new media use’. The suggestions included power outlets, table surfaces and shade. Key elements that are drawn out for consideration include, ‘privacy, mutual surveillance, public safety, opportunity for serendipitous encounters and other social behaviours.’ The current research project seeks to investigate the physical requirements for ICT use in public urban space that support of social interaction.

Forlano (2009) used a mixed methodology of ethnography, a survey and in-depth interviews to examine how WiFi networks ‘interact with socioeconomic factors to reconfigure people, places, and information in physical spaces’. The study found that a new conceptual framework was required for understanding the relationships between people, places, and information. The research looked at the spatial aspects of how freelance workers utilised public places for WiFi networks. It was found that WiFi public hotspots have opened up new ways for freelancers to do their work in semi-public locations, with the opportunity to use public places for co-workings and informal interaction, social support, collaboration, and innovation. The increased mobility and access to the Internet in public spaces has the potential to

reshape the public realm, drawing people back into places and with them vitality. Increasingly the urban environment was being layered with digital information networks (Forlano, 2009). This process requires new conceptual categories that integrate digital and physical spaces. Forlano introduces a concept of 'codescapes' that considering the relationship of software and physical architecture on human behaviour particularly evident for WiFi hotspots.

2.4.1 Communicative planning theory

Communicative planning (or as it is sometimes interchangeably referred to as collaborative planning) was developed out of Habermas' communicative rationality theories of the 1980's (Habermas, 1985; Habermas, 1989; Healey, 1996). Communicative planning focuses on the development of a multiple-voice decision making process, allowing for the inclusion of community in the governance. Used in a number of policy or governance areas, it is particularly pertinent to the nature of urban planning policy. Relying heavily on effective methods of both providing information to a broad community and receiving feedback in response, the role of ICT in the process can be both transforming and directive.

Communicative planning is transforming, in the way that communication channels are opened, and information can be negotiated. It is directive, in the way that the communities' expectations have shifted in line with the availability of communication and response to feedback have changed and influence the governance process.

This experience and need of community participation can also develop a mutually beneficial relationship between ICT development and planning (Houghton, Miller & Foth, 2013). To miss the opportunity to be involved in the developing area of urban informatics (the interconnection between people, place and technology) runs the risk of being left behind completely (Townsend, 2000).

The development of communicative planning approaches

Communicative planning theory (CPT) is well established in the planning field. It was developed out of Habermas' concepts of communicative rationality and communicative action (Habermas, 1985), which understands language as a foundational component of society. Communicative action is founded on the basis

that, as social creatures, humans need social interaction to 'survive and thrive' (Stahl, 2008). It is through communication that we can achieve co-operation. Viewing individuals as autonomous moral beings, communicative action stands for a mutual respect for the individuals' communication offerings. However, each utterance carries several validity claims: those of truth, legitimacy, authenticity and clarity or comprehensibility (Stahl, 2008). If the claims of validity are questioned then discourses can take place to in order verify or qualify the validity. If all communication were ideal, then the only requirement for validity would be the quality of the argument. While the 'ideal speech situation' may never be realized, it is an important precursor to discourses and the ethical inclusion of all individuals (Bohman & Rehg, 2011). CPT builds on communicative action theory by eliciting and emancipating stakeholders' discourses for planning decision-making.

CPT was developed in the 1980's as a concept it gained a level of acceptance within the planning profession and education in the mid 1990s (Sanyal, Vale & Rosan, 2012). By 2000, it was integrated into planning education and practice.

The deliberative democracy approach of CPT focuses on communication in the style of Habermas' discourse, that is to debate perspectives in order to find solutions for planning issues (Bohman & Rehg, 1997). Concepts of openness and inclusion are valued by the CPT approach and within the process.

Communicative planning presents a way of thinking about the development of policy and governance with the interactions of the range of stakeholders holding an important focus. Involvement and inclusion are important values of communicative planning. It was part of the wave of planning thought that sought a more phenomenological and qualitative approach in counter to the more than rational, technical, quantitative analysis, which directed policy development. It sought new ways to break away from positivist and individualist orientations to create active agencies and micro-practices to bring about progressive societal development (Healey 2012).

CPT acknowledges the importance of social interrelationships and the linking of actors in order to direct and change policy. Its critics claim it depends too much on the intellectual strength of an argument, and its difficulty or inability to deal with the stakeholders who manipulate the process from a position of social or political strength for their desired outcome. It is also criticized as a process subject to the whims of the economic and political ideology of the time (Sager, 2012).

Sager (2012) argues for a revived position of CPT, which increases its robustness and develops the theory as a critical theory approach for planning.

The complex nature and multiple governance functions that fall under the gambit of urban planning should also be noted. From the two key areas of strategic and statutory planning roles to the many specialized functions such as infrastructure, heritage, culture, community, social, regional development and development approval and control. The level of community interest and involvement varies across this multitude and can shift over time. In practice time pressures, politics and complexity all hamper the implementation of ideal community consultation processes.

Digital Networks and their influence on societies modes of communication

Discussion over the last decade has highlighted the potential and the development of the real-time city (Townsend, 2000) and the rise of the network society (Castell & Linchuan; Castells, 2000). The city is changing and computing is becoming part of the city (Calabrese, Kloeckl, and Ratti 2009).

Brighenti (2010) work 'new media and the prolongations of urban environments', refers to the urban environments two distinct yet intertwined layers or levels. These two layers are the material or physical and immaterial or the digital. The ways these layers interact defines the experience of the urban environment. Bringhenti considers the complexity of the top-down planning and bottom-up shaping of the city and the layers stating that the urban fluxes and trajectories of these layers can be affected by planning in ways that constrain, segment or enclose, from either direction. This relationship between the physical and digital will be increasingly relevant to urban planning as the rate of uptake (or use) mobile ICT increases.

Real-time, constant communications have notably challenged cities in two ways, firstly altering time and space management while secondly, making automobile-based urban-sprawl more manageable and livable (Laleh, 2010; Townsend, 2000). The current practice and use of the mobile phone, the wireless computer and tablets allows for a freeing up of the worker and workplace, challenging the current planning notions of zones and landuse activities. While planning tool intervene with

policy and process the dynamics of urban systems are played out through the practice of the real-time city that is the actions of the individuals (Laleh, 2010).

While the city is taking on more digital technologies for communication and operations, there is a disparity within the urban community. A difference or divide between those people who have shifted to a digital communication interaction and those resisters and laggers are not connected, who avoid commitment to 'new' technologies and particularly social media communication (Houghton, 2013; Satchell & Dourish, 2009). While there is a shift towards a ubiquitous city even further beyond the digital city (Anthopoulos & Fitsilis, 2010), the lag and slow drift of citizens continues to affect the effectiveness of policy that relies on a connected community (Houghton, 2013).

The influences of digital technology on urban planning

The influences of digital technology are being felt across society, with evidence suggesting they alter mobility, the way people interact with each other, our individuality, our sense of privacy and *'publicness',* our participation and record of public life. Evans-Cowley (2010) suggest the implications are much like those of the introduction of mail, the telegraph and the telephone as they revolutionize communication and information.

The digital age and the new communication tools focused around social media provide a 'rich opportunity for planners' (Evans-Cowley, 2010). In order to effectively use socially generated digital data some of the issues planners need to consider include gathering of data, the management of data, analysis of data, quality of information volunteered by the public (Evans-Cowley, 2010).

Rheingold (2004) and Aurigi (2006) also stressed the importance for urban planning to understand the ways people use mobile media and the powerful impact although sometimes invisible and subtle. While mobile media are changing behaviours, it also offers potential for e-planning and e-participation.

E-planning and e-participation are closely linked concepts (Saad-Sulonen, 2012). Sanford and Rose define e-participation as "technology-mediated interaction between the civil society sphere and the formal politics sphere" (2007, p. 408). The uses or affordances (Norman, 1999) of new media create opportunities for e-governance, translating to e-planning and e-participation. The participatory nature

and the conversations created in the digital realm have similar characteristics to the conversations of communicative action and CPT.

Fernback and Shaffer's (2010) critical analysis of urban planning policies from seven cities in the United States found that planning policies had not reflected the changes of ICT on society. They found that policies had failed to recognise the powerful force of telecommunications on cities, both changing needs and expectations, as well as the changes that accompanied the physical infrastructure and social behaviours of mobile ICT.

Houghton et al. (2013) study of urban planners use and perceptions of ICT in Brisbane Australia, also found that there was limited use and consideration of ICT in planning practice. While there was limited use there was an acknowledgement and interest in the types of uses ICT could have for planning practice. A set of three typologies for ICT use in urban planning was identified. They included: the analysis of place, technology in place, and technology for community engagement (Houghton et al., 2013). The use of technology for community engagement is of particular interest for e-planning and CPT.

CPT in a digital age

There are two distinct ways to consider the development of e-participation in planning or e-planning for the future. The use of traditional formal means of notification and response and the use of new media and new approaches to the types of conversations gathered for CPT, Gordon & Manosevitch (2010) refer to it as augmented deliberation. Augmented deliberation allowing for a combination of traditional planning consultation methods and public deliberation into a virtual environment

Using the CPT principles it becomes vital to define and locate the stakeholders in order to gain their views within the conversation. Some of the challenges of CPT is the various levels of power, education and interest of stakeholders. Obtaining participation requires more than asking questions in traditional formal settings and expecting the answers. In the age of digital technologies facilities like digital storytelling and video recording provide a means of capturing communications from disenfranchised groups and raising the interest of locals (Klaebe, 2006, 2007). This type of communication collection requires analytical skills that may not have

previously been required for planning, but it opens up the means of connection to the community and meets the community on their terms.

Schroeter & Houghton (2011) referred to a neo-planning or 'new' planning that involved the conversation on planning matters through a program called Discussions in Space. The program used short text messages (facilitated as text or Twitter messages) and a large screen to generate a conversation in-situ on planning matters. The potential to generated an interactive discussion rather than a formal written submissions allows for ideas to develop over the course of the conversation. This was a key intention of Habermas' communicative action and way of finding validity through conversations.

The use of digital games for urban planning consultations also presents a new way of connecting and communicating with locals. Community Planit (Engagement Game Lab, 2013) was created for this purpose. Breaking away from the paradigms of formal communication methods and allowing communities to participate with their own language, in interesting ways, which invites community participation and extends the number and demographic range of participants (Schroeter & Houghton, 2011). Conversations can be gathered either through the game in cases like Secondlife (Foth, Bajracharya, Brown & Hearn, 2009) where design ideas were tested in a virtual simulated environment or conversations can be collected later with interviews and reflections of participants.

Social media and web 2.0 tools can also be used to deliver an engaging planning experience to citizens. Social media has grown beyond casual social engagement becoming a tool for community communication, for activism and engagement, for cultural citizenship and innovation (Foth, Forlano, Satchell & Gibbs, 2011). Fredricks and Foth (2013) considered the planning consultation process of four local government areas in southeast Queensland, Australia. The study found that participants saw social media as a useful tool to inform communities but not for public consultation. The main concern expressed being the risk of politicking the issue or topic. This opinion was based on assumption rather than experience or other examples. To date the examples of using social media for planning consultation are limited, as a key method of modern communication it lends itself to further trials and research projects.

Puri and Sahay (2007) looked at the use of ICT in participatory development and identified "four key problematic areas: (a) who defines the participation agenda, (b)

what capabilities do stakeholders have to participate and how can this be strengthened, (c) what is the role of institutional conditions in enabling effective participation, and (d) how do local participatory processes experiences get integrated into broader networks to become sustainable" (p133). While their study was based on the participatory development of developing rural areas, these same areas are echoed in other planning scenarios.

Networked capital is social capital developed through digital media (or ICT) networks. Social capital considered in the framework of urban informatics (that is the interconnection of people, place and technology) provides a lens to consider the interaction of social capital in both technology and a linking to sense of physical place (Foth, Choi & Satchell, 2011). Increased mobility of the modern era and the freedom of wireless connectivity creates possibilities for new synergies between people, place ,and technology. Elements of people, place, and technology can combine to create opportunities that strengthen communities through knowledge sharing and glocalisation, this has implications for planning theory and practice.

A digital communicative planning approach

ICT is playing a significant role in the way people communicate and negotiate social interactions. This is consistent with the findings of Dourish and Bell (2011), and Wellman (2004), as well as others in the field of Human-Computer Interactions. Communication changes are also affecting a shift in the expectations of interactions between friends, acquaintances and the official organisational structures like government agencies. Referred to as 'Web 2.0' expectations (Kaplan & Haenlein, 2010) they required responsive and interactive communication exchanges as well as providing up-to-date information. Some of the key changes are the globalisation of knowledge, co-presence and distant others, and combined or hybrid places (both physical and digital), as well as the development of networked communities of practice.

Communicative planning theory highlights the relevance and need to develop channels of communication, between the decision makers, planners, and the community for good planning practice (Healey, 1996). The processes of effective democracy require broad community engagement and participation (Rydin, 1999).

Communicative planning theory emphasises the need for this discussion around land use and development issues (Healey, 1996). The importance of communication as a process between community members and governance authorities has been discussed in each of the four phases of this research. There needs to be an ongoing dialogue between governments and community, which can be supported, even contextualised through a connection to meaningful places. Public libraries present an attractive place for these conversations (Goulding, 2009) this is especially true in light of the digital divide of those who have access to digital technologies and ICT versus those without ICT access. The public library can provide a bridge or connection to those without access.

Communicative planning also refers to an ongoing dialogue, and creation of a community of practice (Wenger, McDermott & Snyder, 2002) for urban planning specifically to improve local placemaking. It reaffirms the value of broad community participation within the conversation of planning practice, and an ongoing role for the planning profession within the discussions and actions that make great places. The combination of action and discussion is powerful, and the use of ICT is a vital element for support and connection of the placemaking discussion. A conversation both face-to-face and digitally, involves and is enhanced through the professional planning and design voice. It is also inclusive of community enabling the further development levels of participation. These levels range from involvement in the organisational aspects of the placemaking events to discussion about the strengths and weaknesses, desires and aspirations, through to a simple interaction with people and place through events. The length and commitment to the communication process can vary. Urban planning can gain by exposing their profession and the values of planning to the community. In an open approach to planning as this, suggests planners require a high level of skill of listening and analysing the feedback from the community. It also requires interaction and co-ordination of the community's involvement in planning 'activities' and place activation. This can be facilitated and aided by the use of ICT tools and applications. The use of ICT tools could revolutionise the method and type of communicative planning involvement being sought.

2.4.2 Current discussion and use of ICT in planning

The discussion of the use of ICT in urban planning is emergent, but clearly indicating that ICT offers potential for the communication and data collection requirements of planning. Notably Evans-Cowley on social media for communication (Evans-Cowley, 2010a), Evans-Cowley (2010b) in relation to sensor data, and Williamson and Parolin (2012) in relation to web-based deliberations, while Odendaal (2006) suggested the use of ICT to better understand the lived experience of citizens. Further, Cinderby (2010) introduces a participatory geographic information system P-GIS to engage 'hard to reach' citizens in the planning process.

To date the use of ICT, specifically social media for planning has generally been limited to community activist groups (Evans-Cowley, 2010a). These conversations rarely included planning or governance voices, both the planners and the decision makers general did not consider the activist's discussion in their deliberations. Evans-Cowley (2010b) further considered the role of digital urban sensing for planning discussion of the functionality of mobile phones for sensing and surveillance. She suggesting they offer significant potential for urban planning in the supply of urban data, if data management issues can be controlled. Collaborative cross-disciplinary efforts are required if we are to gain meaningful contributions from urban sensing with digital tools such as mobile phones, Web 2.0, GIS, RFID, Bluetooth surveillance cameras (Cuff, Hansen & Kang, 2008; Robinson et al., 2012).

The extent to which the practicing planning is aware of, utilising or considering the use of ICT is unclear within the literature. Much of the discussion is based on the theoretical assertions and developments generated in human computer interaction disciplines rather than in urban planning contexts. It is in this gap of knowledge that this research endeavor to contribute a further understanding.

2.5 FILLING THE GAP BETWEEN PEOPLE, PLACE AND TECHNOLOGY

Ubiquitous computing (Bourdieu, 1989) is referred to as the 'third wave of computing' as we moved from mainframes to personal computing, and now to ubiquitous computing which is assimilated into everyday life. This new form of computing merges information technology and communication in new and exciting ways, pervasive to all aspects of our lives. What is of great interest is that the

development of communication technology and the expectations of supermodernity mean that ICT connection becomes the necessary accessory, the presumption that you will be ever present and accessible. It is now an expectation rather than a marvel.

As communication and information technologies develop the extent of their influence on everyday life and the built environment becomes more apparent (Aurigi & De Cindio, 2008). While the area of human-computer interaction is a relatively new discipline compared with sociology and planning, the potential for research into the inter-relationships of people, place and technology is increasingly relevant to the development of modern urban environments.

Building on the work of Paay and Kjeldskov (2007) that investigated 'social experience of a physical place providing an understanding of peoples' situated social interactions in public places', this research will consider the specific Australian urban context. The emphasis of the research outcomes will be related to the urban design aspect of the tri-fold relationship – people, place and technology.

The Janus faces of mobile phones (Arnold, 2003) refers to the ironic, perverse and paradoxical effect of this technology on everyday life (Janus being a metaphor based on a Roman god with two faces). The original intent or expectation of technology, while met, may also led to a paradoxical effect. To be aware of these paradoxes and avoid a technological determinism that is blindly unprepared for this other face – this Janus face – of technology (Arnold, 2003). In ignoring the impacts of technology on daily life and not assessing the best way in which the relationships of people, place and technology can be understood, the effect on the community remains fatalistic, laisser-faire or technologically driven at best. There is a responsibility for the question of the role of this technology in and its affect on urban planning.

The issue of surveillance and control through the use of digital technologies is one of the Janus faces. The work of Shepherd (2011) highlights the infringements on civil liberties through the use of surveillance and digital sensors, which are becoming pervasive within the modern city. Martinez-Balleste et. al (2013) considered the risk of loss of privacy in the 'smart city. Their work defined a concept of a privacy model with five dimensions including, 'identity privacy, query privacy, location privacy, footprint privacy and owner privacy' (p136).

Graham and Marvin (2004) refer to a process of 'splintering urbanism' where the use of digital technologies narrows and fragments the experience of the urban

environment. Within the surveillance society introduced to reduce or eliminate crime, the Janus face removes the individuals' privacy. While our increasing use of technologies for infrastructure provision make us reliant and vulnerable in the event of malfunction.

HCI research has focused on looking at ways that communication technologies could enhance and add value, channeling positive behaviours. Work such as Paay's (2005) considered how pervasive computing could augment social interactions in the built environment from an ICT perspective. This work offers an insightful perspective for the urban planner in terms of public behaviour and public perceptions of places in relation to HCI. The study's exposure of the potential for antithetic experiences by various demographics creates an intriguing area of questioning for user groups and by extension to planning professionals' with their interpretation of needs of various groups. As not all demographics are equal in terms of their familiarity and use of technology, what impact does this have on the public place and the social interaction of a space?

Further research investigating these areas includes that of Bell & Dourish (2004). Their research considered practical and cultural organisation of space, exploring the ways in which ubiquitous computing may condition and be conditioned by, the social organization of everyday space.

New media is urbanised, generally designed for social relationships in the context of modernity (Brighenti, 2010; Carroll, 2002). There are a number of studies that focus on the potential to utilise new technologies to augment social patterns and places (Aurigi & De Cindio, 2008). We also see that place design has acknowledged that the community interaction, that is human interaction, is vital for the creation of 'good places' for a quality public realm (Gehl, 2009). If we merge these thoughts we find ourselves with unanswered questions about how the physical spaces need to change to best adapt, acknowledge and augment these new technologies to create for optimal benefits socially, spatially and technically (Paay, Dave & Howard, 2007).

Troy (1995) saw a risk for urban planning and architecture if it failed to respond to the discussion of changing information and technological age, in that they would be disconnected and relegated to an insignificant role when the importance has shifted to the non-physical information space. This research challenges this assertion and seeks to consider a more collaborative approach to creating active, engaging and social places in the modern city.

Holland et. al (2007) suggest there are two prominent narratives in current writing and thinking on public space. One refers to the apparent decline of public space, linked to processes such as privatisation, regulation and surveillance. The other offers a less pessimistic view of public spaces enabling diverse groups to come together to display their identities in the public arena. There thus appears a paradox between public spaces as sites where difference is being eliminated, and sites where difference can be celebrated (Powell, 2006; Sennett, 1974; Zukin, 2009). It is the approach of this research to take an optimist view of the potential of public spaces and consider ways it might be enhanced through new media and spatial organization.

2.6 CONCLUSIONS

The speed of modern life and the introduction of new forms of communication are changing our relationships with time and space. They impact our personal expectations of our lives and our relationships with others. Wellman (2001a) suggests the speed of the Internet development is 'like a dog year, changing approximately seven times faster than normal human time' (p.2034) suggesting that we would continue to move from group-based societies to network societies (referring to Castells' (2000) networked societies). Wellman's insights into the development of the Internet have continued to hold true with its affordances continuing to serve as powerful forces affecting social interactions and the need for social 'network concepts and tools for engaging within the Internet'.

Identity, knowledge and human relationships all play a pivotal role in the development of a sense of place. The new affordances of ICT have seen a changing cultural perception of place and new ways for the individual to connect with people and place, altering social behavioural patterns. A networked society has emerged through which we interpret our environment both locally and globally (Gumpter & Drucker, 2008).

Social places, particularly third places provide a connection with others including existing friends, community acquaintances and strangers. These relationships are integral to our sense of belonging, our understanding of the world in which we live and our emotional wellbeing. Social networks offer new ways to

socialise and connect. They are integral to our sense of community and the development of social networks.

The impact of these changes mean new ways of viewing and understanding our urban areas which frame and provide the context or setting of much of our social interactions. The discussion of the impact of mICT on our understanding and interactions with place in urban planning needs to continue from Graham and Healey's (1999) insights to move the theoretical and practice perceptions of place as object centered and a 'container' relational in time-space city, to a more encompassing definition to include the development of virtual, cyber and augmented spaces. Since their work in 1999 the mobility of ICT shifts the relational context of space again and accounting for the new hybrid of space, information and networked interactions needs to be revisited and considered.

What are the affordances of ICT and new media that can affect the good design of public urban spaces? How can public places function to encourage and enhance networked interactions and the development of community and social capital? How should planners respond to the changing needs and expectations of networked communities? How can networked interactions be used to revitalise and create vibrant livable cities?

Chapter 3: Research Design

3.1 METHODOLOGY AND RESEARCH DESIGN

3.1.1 Research Approach

The use of digital technology in urban planning is an emerging field of interest. With limited existing academic work from a planning perspective to draw on, there is value in addressing the research questions with the support of other disciplinary areas such as human-computer interaction, information and communication technologies (ICT), urban technology, and sociology to name a few possibilities. Gleaning insight from these other disciplines, where discussion and practice has occurred, was advantageous. The elements of people, place and technology lend themselves to a trans-disciplinary research approach, incorporating a range of varying disciplinary insights. Considering theories from the range of disciplines, a qualitative framework is used to elicit the narratives that give voice to individuals, their history, meaning and context (Odendaal, 2006; Rogers, 1997). The qualitative approach is used to situate the research within a real world setting – drawing together interpretive, material practices that make the world visible. Through these practices emerge a series of representations to understand our world (ABS, 2011b). Specifically, a phenomenologist's lens was applied, which is based on understanding social and psychological phenomena from the perspectives of the people involved (Welman & Kruger, 1999). In the case of this research, a number of perspectives were drawn into view, acknowledging that there are multiple ways of considering the problem from various positions or perspectives. The perspectives included the experts or planning professionals, a more general public view, a governance view, and a view from those citizens keen to have an input into the place creation of their city.

To provide this multifaceted view, the research was divided into four phases with unique data set for each phase. The first phase was used to establish the current baseline or perceptions of urban planner practitioners towards ICT and digital media, within their professional roles. The second phase, specifically focused on a public

place with the qualities of a third place (Oldenburg, 1989) that could also be examined in light of the use of digital technology. The public library offered an opportune case study fitting the required criteria. Phase three furthered the consideration of the library case study and focus on the perspective of management responsible for governing these places for the benefit of communities and regions. It looked at the influence of these third places in a socio-economic context. The final phase four, zoomed out to a city scale again, considering a connection between planners and citizens in the co-creation and re-creation of places. It looked at the use of networked interactions for the process of enlivening and improving livability.

The four unique phases come together to provide an overall narrative that enlightens the issues pertaining to the research questions. The research questions are addressed as the study moves through the phases. While each phase was contextualised through the qualitative phenomenologist's lens, a different method was used as appropriate to each phase and perspective.

3.1.2 Phase One – Urban Planners' Perspectives

In the first phase to understand how planners' current perceptions of digital technologies currently or potentially could affect their professional roles and responsibilities, qualitative semi-structured focus groups were used. Three focus groups brought planners from a range of different contexts together, including state and local government planners, private practice, academic, consultants, landscape specialists, community specialist. The interaction between the planners within each of the focus groups, allowed for the stimulation of ideas and thoughts about the questions raised. Generation of discussion was valuable in the exploration of issues and potential for ICT. Specifically, this phase considered the first research question:

1. *What is **the role of digital technology in supporting urban planning** for the purpose of design and creation of public places*?

As experts and practitioners, they were able to discuss current practice while also envisaging potential and perceived risks or barriers in further utilising digital technology in the future. Their frames of reference contextualised the use of digital technology for the particular application to urban planning and placemaking, within the value set and key aims of urban planning. This baseline revealed limited current use, with a few minor projects sporadically being implemented. This phase

established a context for further phases while directly addressing the first research question.

Figure 3.1 Focus Group

Based in Brisbane, Queensland, one of the fastest growing regions in Australia, it provided an example of a planning context under fast paced development pressures. Using the planners' own perspectives, the study aimed to contextualise the perception and use of ICT for place management from a practicing urban planner's perspective, development processes and the cultural nuances of the planning profession. As Table 3.1 illustrates, the focus groups involved a total of twelve planners from a range of backgrounds including local governments, state government, private sector consultants, community planners and educators. (Table 3.1 shows a breakdown of gender, professional perspective and ages of the participants.)

Code	Gender	Professional Perspective	Age Bracket*
UP1	Male	Local government planner	25 – 35
UP2	Female	Local government planner	25 – 35
UP3	Female	Local government planner	40 – 50
UP4	Female	Local government planner	30 – 40
UP5	Male	Local government planner	30 – 40
AC6	Female	Academic	40 – 50
AR7	Male	Architect - State government	50 – 65
C8	Female	Community planner	25 – 40
LP9	Male	Landscape architect	30 – 40
LP10	Female	Landscape architect	25 – 35
CP11	Male	Consultant Planner	40 – 50
CP12	Male	Consultant Planner	50 – 65

***(Age estimates only)**

Table 3.1: Participant profile – gender, age and planning position

Planners were recruited through convenience sampling using known networks (including the Planning Institute of Australia and university contacts) to ensure a mixed sample covering the various perspectives of the profession. Potential participants were emailed and offered gift card incentives ($100) to participate and thank them for their time. The focus groups were held at the university, and ran for approximately 90 minutes each. The discussion was broken into two distinct parts. The first part focused on the potential use of location based mobile media for public consultation; a particular program for short message in-situ consultation was demonstrated and discussed ('Discussions in Space,' see (Schroeter & Foth, 2009).

The second part was directed at understanding how the planners currently understood and interacted with social media and other mICT and digital media in their daily professional context, as well as any potential or concerns they had about its use in the future. Although these areas provided a guide of key issues to be covered, a semi-structured approach was purposely utilised to ensure the focus group moderator (the PhD candidate) had the flexibility to probe emergent issues and adapt questions as required to fully explore, and understand participants' perspectives. The list of questions used to guide the semi-structured focus groups is provided in Appendix A. The sessions were videotaped for transcription and analysis, which were then transcribed and thematically analysed to identify meaningful categories or recurring themes that emerged from the data (Guest, MacQueen & Namey, 2012).

The thematic analysis was conducted in Dedoose qualitative research software. Dedoose functions like other electronic programs, to assists qualitative analysis by allowing text to be captured and coded into themes and categories (Robson, 2011). The process of transcribing and coding and listening to the videos ensured not only familiarity but also rich engagement with the data during the analysis.

3.1.3 Phase Two – Third Place Users in the Public Library

The second phase was to consider how users of public places connected and developed networked interactions, and in turn how these would impact on the design of those places. Focused on the second research question:

2. *How does, or could, the use of digital technology in our public urban spaces, support a sense of community, belonging and the creation of meaningful places?*

Public places fall into a wide variety of classifications and it was necessary to narrow down to a specific type of public place in order to look in depth at the interactions and the use of technology in situ. The public *third place* as discussed by Oldenburg (1989) addressed the concern with community, belonging and meaningful places. Further narrowing down from the possibilities of cafés, bars, parks, sporting venues, mall and libraries (to name a few) was necessary. Public Libraries in particular claim the title of third place and see it as an important part of their identity and value within the community. It therefore provides a meaningful case study and a managed *place* to obtain the necessary data to understanding the experience and relationships of these third places. Some public libraries are also actively seeking to build a presence in the developing digital hybridity of place. This convergence of people, place and technology in libraries aligned with the research questions to provide an appropriate research site.

Phase two of the research developed in conjunction with the opportune invitation to participate in the steering committee for the revision of the strategic plan for a public library service in Canada Bay, NSW. The public library had already been discussed in the library literature as a third place (Aabø & Audunson, 2012; Buschman & Leckie, 2007) and the values of public libraries as inclusive and open to all provided foundation for this phase. Canada Bay Library, in revisiting their strategic plan, wanted to consciously incorporate new digital technology and

services. At the same time they sought to further facilitate their use and perception as a public third place within their community. Keen to investigate the relationship of their community with technology and the physical library, they invited the researcher to participate in their community steering committee and undertake further research within the Concord library (the main branch library in Canada Bay local government area, Sydney NSW). Through the steering committee, the researcher was able to have input in the design of the survey run by the library, collect data as a participant observer of the steering committee, conduct in-depth interviews with library users and access to library reports and data. This wealth of data was drawn together using the case study approach as a method. The qualitative case study as a research method, allows for the contextual examination of a case, with its use of a broad range of data to enlighten the study area (Yin, 2003).

The resulting paper (Chapter 5) published in the Australian Library Journal is specifically targeted and pitched to the library sector audience, investigating the relationship of *people, place and technology* in the library. While providing a specific contribution to the library sector, it also illuminates some of the relationships and practices of Australian urban communities in relation to third places and technology in addressing the second research question.

The use of the case study approach in this research allowed for a variety of evidence about the function of the library and the values of users to be drawn together in a concise and meaningful way. The case study as a method has the epistemological advantage that it provides a basis for naturalistic generalisation (Stake, 2009; Yin, 1994; Yin, 2003). It involves understanding the experiential context of social matters and was chosen to best relate the lived experience of the community's networked interactions in the Concord Library context.

Cresswell and Clark (2007) refer to the case study method as a means of exploring issues within a setting or context. Within this bounded system, the use of multiple data collection casts light on the setting in a multifaceted way. Yin (1994) outlines six methods for data collection in case studies, and these are shown in the following Table 3.2. Beside Yin's six categories the corresponding data sets for this case study are listed.

Yin's case study data	Concord Library case study data
Documents	Canada Bay Library Services Strategy plan 2012 – 2017; State Library NSW comparison statistics. The library's review of 902 survey questionnaire responses and results of 14 focus groups conducted by library staff included in the strategy plan
Records	Minutes of community steering committee meetings
Interviews	20 in-depth, semi-structured interviews; informal conversations with librarians and café staff;
Detached Observations	From within the library.
Participant Observations	Within the strategic planning community consultation steering committee.
Physical Artifacts	The physical setting of the library and surrounds.

Table 3.2 Data sources for Concord library case study (adapted from Yin 1994)

The in-depth interviews are the focus of the case study, supported by additional data sources to contextualise and create the narrative of the Library's position. However, in order to provide contextual richness in the data analysis and to verify findings through triangulation, the other data sources (listed in Table 3.2) were also used including the findings of 14 focus groups run by library staff, and the library's community survey that gathered 902 responses. The researcher was invited to participate in the library's strategic planning community steering committee, and given permission to make observations of these meetings as well as observations and interviews within the library. Semi-structured interviews were held with library users in the public areas of the library, over a two-day period. These varied in duration from 30 minutes to over an hour. The following Table 3.3 shows a summary of the interviewed participants' information. The questions were focused around the development of community networks in the library, as well as the opportunities and barriers of information and communication technologies [ICT] within the library context.

Code*	Gender	Age range^	Occupation	Main motivation for library use
P1	F	25 – 35	Parent of toddler	Story-time, café
P2	F	25 – 35	Parent of toddler	Story-time, café
P3	F	30 – 40	Student and parent	Quiet space
P4	F	20 – 30	Student	Desk space, quiet and resources
P5	M	30 – 39	Freelance worker	Desk space and café
P6	M	45 – 55	Worker	Internet access and social contact
P7	F	45 – 55	Part-time work	Café and borrowing books
P8	F	40 – 50	Worker	Café and borrowing books and magazines
P9	F	65 – 75	Business owner	Reading newspapers, borrowing books, author talks
P10	M	65	Semi retired – part-time work	Borrowing books and Magazines
P11	F	65 – 69	Retired	Borrowing books, author talks
P12	M	55 – 65	Retired	Meeting friends café and author talks
P13 – P20	F	60 – 89	Retired	Knitting Group

Table 3.3 Participants socio-demographic profile

The interviews were audio recorded using a Livescribe pen (with recording capabilities), transcribed and later coded for analysis again using Dedoose software for thematic coding (Guest et al., 2012). The thematic approach identified and coded data (the discussion of the participants) into meaningful patterns, categories and finally sorted into themes (Liamputtong & Ezzy, 2006).

Figure 3.1 Concord Public Library, Canada Bay NSW

3.1.4 Phase Three – Library management a governance perspective

The third phase, further utilises the library as an example of a *third place.* It looks at the managers' views and the governance of libraries, within a global context where libraries are under pressure to justify their existence due to tough economic times, and in light of the ubiquity of digital information storage and databases enabled by the Internet. Specifically the Google search engine is the corollary of information needs and non-library users see it simply replacing the traditional public library's raison d'être (the most important reason for its existence). The library, formerly a key source of information to communities, is in a position to reconsider, justify and quantify their value to communities. This phase looks at the possible future directions for public libraries. Part of their potential for the future is their positioning in regard to the adoption of ICT and mobile information and communication technologies (mICT) – while possibly a threat and it also provides new opportunities. The relationship of *people* and *place* to *technology* is pertinent to the future objectives and strategies of library services that are to remain relevant and progressive within society. This paper is presented to a governance audience, at the local government level, and has submitted and accepted by the *Commonwealth Journal of Local Governance*. The use of the library as a case study draws out the

relationships between governance and control of the matters related to *hybrid places,* while providing a context to observe the underlying community interactions and connections.

The phenomenology lens (Welman & Kruger, 1999) cast on library experts drew on a wealth of experience and aligned with the qualitative nature of the overall research plan. It allowed for a detailed investigation into motivations and frustrations that underlie the experts' opinions, providing a richness unavailable in more quantitative approaches. The data for this phase was drawn from in-depth interviews with library experts with vast and particular experience in the use of technology in libraries (multiple libraries in some cases). These interviews were designed to help understand real world examples of third places (libraries) that are experiencing the change of technological developments.

This phase, while still reflecting on the second research question, starts to redirect the narrative towards the ways that those responsible for the governance objectives of places can collaborate with community to develop the library as a meaningful *place*, preparing for the third research question.

Empirical data, in the form of qualitative expert interviews, was gathered to address the specific research questions of phase 3. There were four linked questions:

- What are the challenges and opportunities of presenting the library as a communication node within the city structure?
- How do library managers and local government policy initiators envisage and regulate libraries as communication hubs?
- How do decision makers and stakeholders – inside and outside of libraries – perceive the changing role of libraries?
- How can libraries optimise their position as spaces that enable communities to participate and that act as innovation hubs and communication nodes within the greater context of urban environments and communities?

The use of experts allowed for the collection of information that reflected a depth of experience and knowledge (Brogner, Littig & Wolfgang, 2009) in relation to the positioning and existing uses of libraries. The 14 interviewees included library managers, state government library advisors and consultants, a private library

consultant, IT librarians, and a Local Government Association policy advisor. Interviews were held in both New South Wales and Queensland. The participants were chosen for their depth of knowledge and experience within the library sector, as well as their role in directing the future policy of libraries. Contact was initially made by email, and phone calls as necessary. Each interview lasted approximately an hour. Interviewees were happy to participate without the use of incentives, keen to share their insight and knowledge; some asking detailed questions about the direction of ICT after the interview.

The interviews were semi-structured, thus allowing for inquiry into emergent issues. The questions focused on these key topics:

- the changing roles of libraries in the digital age (for community, economic development and lifelong education);
- the role and adoption of digital technology in libraries;
- the implications of the NBN rollout across Australia for libraries;
- the development of a sense of community in libraries;
- the physical changes to libraries that relate to a changing digital media environment.

Responses were coded and analysed in terms of the themes that emerged from within the data (Guest et al., 2012). The three key themes were the localisation of knowledge in a digitally global network; optimising and developing skills and talent; and technology resources and access. Each is discussed in turn in Chapter 6.

3.1.5 Phase Four – Examining urban acupuncture approaches for placemaking

The fourth and final phase of data collection was designed to address the third research question:

> *3. How can the use of digitally networked interactions (ICT and mICT) be appropriated to support or enhance the way urban planners collaborate and work with community to create public urban places?*

To this end the focus needed to return to more traditional planning perspectives and activities. As well, the previous two phases had revealed strengths in community networked interactions (both digital and face-to-face) that warranted further consideration. A context where community involvement and planning agendas came together was sought. The UR[BNE] design collective provided an interesting case

study of enthusiastic design professionals working to develop great places and networks across Brisbane. In order to gain an overall perspective of the design collective within the networks and urban planning practice of Brisbane, a case study methodology was utilised. The case study approach narrates the experience of the UR[BNE] design collective and the associated UR[BNE] Festival 2012 comprising of events held across the month of May 2012. It considers how designers and planners utilised new processes and tools for the design of public urban spaces. It also considered the use of social media to assist in creating responsive changes within the environment. The specific case study data presented in this research were analysed in terms of the narrative that unfolded to detail social media, spatial relationships and planning interactions. The real world examination of the phenomena, acknowledges that humans are inextricably linked to their environments (Gillham, 2000, p. 5).

As the relationship with the specific social and environmental context was of interest in this research, the UR[BNE] Festival 2012 as a case study was appropriate to the research aims. The analysis of the case study data was grouped around issues (Stake, 1995) identifying key themes related to the research questions. Analysis defined as taking things apart (Stake, 1995) was an ongoing process throughout the research, focusing on the aspects that shed light on our research questions and detailing the context of the case. The data collection was based on Yin's (1994) six methods for data collection in case studies including: documents, records, interviews, detached observations, participant observations, and physical artifacts.

The methods of qualitative interviews, focus groups and case studies, which contextualise the research problems within real life settings are drawn together to provide multiple perspectives of experiences that inform the research.

Interviews	Organisers of UR[BNE]	Recorded semi-structured one-hour interviews with two of the key festival organisers
Participant observation	Ideas Café Social networking sites such as Facebook, Twitter and Tumbler	Attended UR[BNE] workshops, and monitored and participated in the group's online social networks
Documentation	• Facebook • Twitter • Tumbler • Photos • Video Footage • Flyers & program	Collected and analysed data from two sources: the UR[BNE] group's own publications and postings, and online articles written by journalists

Table 3.4 Data Collection Methods

Documentary and thematic analysis was used for each data set including interviews, focus groups and case studies. Thematic analysis of both the focus groups and the semi-structured interviews involved open coding of data and development of themes responding to the research questions.

The research sought answers to key questions, both in the interviews and in the analysis of other data. These included:

- How did the use of social media support and develop the UR[BNE] Festival and Design Collective?
- What were the issues that arose through the use of social media?
- Was there a relationship between the digital and physical spaces?
- Did the festival have an impact on Brisbane and the design of its public urban spaces?
- How do these networks function within the formal structures of planning to enhance urban places?

In response to these questions and the data analysis, a narrative of the experience of the UR[BNE] Festival and Design Collective was developed.

The Brisbane UR[BNE] Festival 2012 was run by the UR[BNE] Design Collective[1]. Brisbane is located in South East Queensland, one of the fastest growing regions in Australia. Population projections estimate growth from 2.8 million people in 2006 to 4.6 million in 2031, equating to an additional 70,600 people each year (ABS, 2011a; Office of Economic and Statistical Research, 2011). This growth rate puts pressure on the city to provide sustainable, attractive, and enlivened spaces.

The UR[BNE] Design Collective and Festival provided examples of events and discussions that happened in both digital and physical ways. This interaction highlights the hybridisation of city spaces as digital layers interact with physical spaces for the purpose of placemaking. The UR[BNE] Festival sought to implement hyper-local treatments through the underutilised spaces of the city employing both physical and digital interventions, as part of a month long urban acupuncture program of local events across Brisbane.

The UR[BNE] Festival is an initiative spearheaded by three young professionals (two urban designers and a community planner) who wanted to improve the quality and use of places within Brisbane. They shared a professional interest in placemaking as a tool for enlivening cities, as a means of contextualising the spatial elements of the city. Looking at ways to develop community and a sense of place simultaneously, the UR[BNE] Festival sought to create new social spaces and new ways to relate to spaces.

A summary of the methods and the resulting thesis structure is summarised in the following Table 3.5. Table 3.5 demonstrates how each of the phases reflects back on the research questions and provides a quick overview of the research.

[1] http://www.facebook.com/urbne.festival/

Table 3.5: Methodology Outline

Phase 1: Urban Planners' Perspectives

Responding to research question:

What is the role of digital technology in supporting urban planning for the purpose of design and creation of public places?

METHOD	PARTICIPANTS	SITE
Three focus groups Thematic analysis	Urban design professionals: planners, designers, architects, community planners & landscape architects	Brisbane

Phase 2: Third place user perspectives

Responding to research question

How does, or could, the use of digital technology in our public urban spaces. Support a sense of community, belonging and the creation of meaningful places?

METHOD	PARTICIPANTS	SITE
Library case study (semi structured interviews, Council documents, survey data)	Library users (through semi structured interviews) & non-users (through survey data)	Canada Bay, NSW

Phase 3: Library management a governance perspective

Responding to research question

How does, or could, the use of digital technology in our public urban spaces. Support a sense of community, belonging and the creation of meaningful places?

METHOD	PARTICIPANTS	SITE
Semi structured interviews	Library directors, managers, IT librarians, library consultants	Queensland & NSW

Phase 4: Examining urban acupuncture approaches for placemaking

Responding to research question

How the use of digitally networked interactions (ICT and mICT) is appropriated to support or enhance the way urban planners collaborate and work with community to create public urban places?

METHOD	PARTICIPANTS	SITE
Case Study (semi structured interviews, observations and documents)	Urban design professionals, planners, urban activators	Brisbane, QLD

Alternative approaches for this research project were considered but dismissed in favour of a view of the experience as it is lived, a particular advantage of a phenomenological approach. The combination of case studies and interviews allowed for the broad overview that would have been restricted in other approaches.

3.2 ETHICS CONSIDERATIONS

This research involved a series of what were considered to be low risk interviews and focus groups, including: urban planners, the public in the context of the Concord library, library managers and organisers of the UR[BNE] Festival 2012. Appropriate ethical clearance was obtained for the study through Queensland University of Technology's University Human Research Ethics Committee. Interviewees were informed of the purpose and implications of their involvement and their consent was obtained prior to each interview. Interviewees were also informed of their right to stop the interviews at any point and their right to withdraw from the research should they desire to do so – which did not occur. Participant interviews remain anonymous throughout this thesis.

The appendices of the thesis contain copies of:

- The schedule of questions for interviews (Appendices A – C);
- The ethical clearance forms (Appendices D);
- The ethical approval form (Appendix E);
- The recruitment email for focus groups and interviews (Appendix F)

Chapter 4: Integrating ICT into the planning process

Houghton, K., Miller, E., & Foth, M. (2013). Integrating ICT into the planning process: Impacts, opportunities and challenges. *Australian Planner*, 51(1), 24-33.

Publication: Australian Planner (Taylor and Francis)

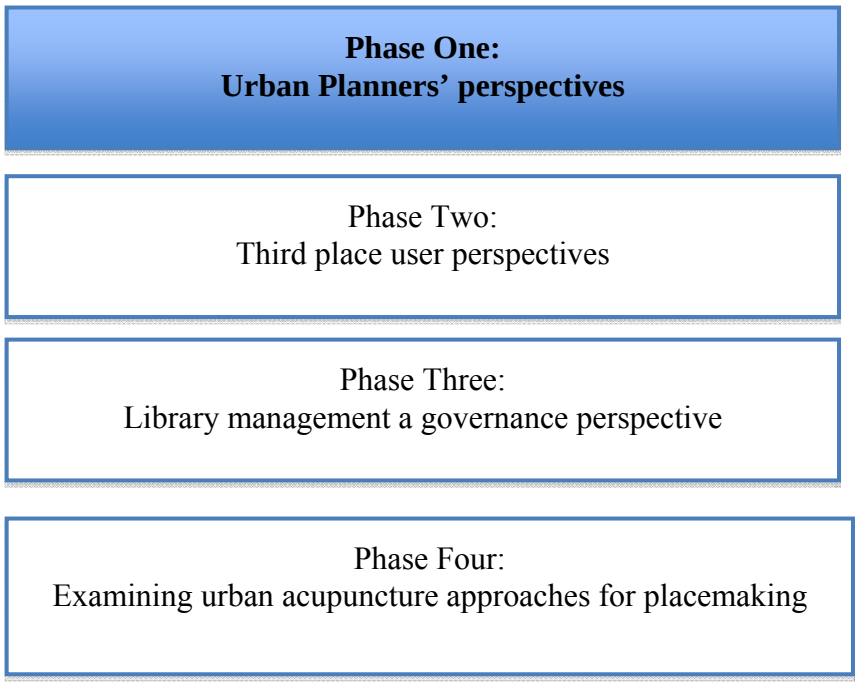
Web: http://eprints.qut.edu.au/56430/

http://dx.doi.org/10.1080/07293682.2013.770771

Status: Published

Year: 2014

Diagram 4.1 Thesis structure diagram: Position of paper



Preamble:

This paper, published within the Australian Planner, presents the findings of the first phase of the research project (see diagram above). The aim of the study was to examine the current practice and perspectives of urban planners concerning the use of ICT for planning, based on their personal experience, roles and responsibilities. Addressing in part, the first the research question:

> *Research Question 1:*
> *What is the role of digital technology in supporting urban planning for the purpose of design and creation of public places?*

The methodology was based on talking to the experts, the planners themselves. Due to the diverse nature of their various roles, they were formed into focus groups that allowed discussion to generate around the concepts and issues of the use of digital technology in planning. The effect was to see the development of potential ideas for future use measured by experience of the past. The paper contains the detailed methodology.

This first phase of the research provides a baseline for further consideration of both the development of technology, and the encouragement of its purposeful use in urban planning. The premise for its relevance in modern times is built on the values of the communicative turn of planning (Healey, 1996), where planning models have shifted from post-industrial values to more inclusive and participatory models, as a foundation of democratic empowerment of citizens (Sager, 2009). Participation within the planning process also improves the acceptance of projects for their implementation (Brody, Godschalk & Burby, 2003; Burby, 2003). The value of a participatory and collaborative approach to design problems in the urban planning field is emphasised by Barham (2009). At the core of participatory and communicative planning theories are concepts of dialogue, inclusion, tolerance and autonomy (Sager, 2009).

Barham (2009) notes that the process effective communication channels can be challenging as can the process of drawing out creative solutions to urban planning design issues from community. Barham suggests that planners and designer need to embracing technological solutions to meet these communication needs.

Planning has seen the successful use of some web interactions for the extension of communication with community (Williamson & Parolin, 2012). Brisbane City

Council has itself employed a number of digital engagement strategies to promote the city (Dionysius, 2002; Odendaal, 2003) and generate online community participation. The now defunct *ourbrisbane.com* for instance held out high ideals for the development of e-governance and a smart city. Interestingly, even in the wake of a project with high ideals for online engagement the use and acceptance of ICT for planning purposes within the Brisbane context was limited, as outlined in this paper.

There were two papers produced from the focus groups used for this research. The first specifically investigated the use of 'discussions in space' a digital tool for location-based engagement through ICT media. The reference for this paper is provided here:

Schroeter, R., & Houghton, K. (2011). Neo-planning : location-based social media to engage Australia's new digital locals. *Australian Planner, 48*(3), 191-202.

While this paper does not form part of this thesis, the insights are relevant to the discussion of urban planners use of ICT for community engagement. Its purpose was to considering the comments and feedback generated through 'Discussions in Space', where planners reflected on the effectiveness of this type of media for eliciting community engagement on planning issues.

The aim of the 'Discussions in Space' digital application was to lower the barriers for the local community when responding to specific planning matters by allowing a digital form of discussion or collaboration to occur in-situ. That is specifically 'at the right place and at the right time' (Schroeter & Houghton 2011).

Exploring ways of increasing citizen engagement through the use of ICT, this study was informed by earlier work of Schroeter and Foth (2009) that identified particular groups of residents who governments had difficulty engaging for community engagement projects. These groups included: younger, time poor, transient or apathetic 'backyard buddies' (Schroeter & Foth 2009). The increasing issue of community disinterest and declined trust of politicians and political processes is noted by Dalhgren (2009) and Gibson et.al (2008).

It aimed to provide a quick and relatively easy way for the tech-savy digital locals to interact with government through their mobile devices.

Identified within the research were key themes to consider for the use of 'Discussions in Space' for planning consultations. These included both positive and negative aspects of the technology.

Planners viewed the positive aspects of this type of engagement to be:

- The brevity of the messages, which were succinct and to the point
- The 'light-bulb' moments where brainstorming with the public brought out unusual and unexpected ideas, less confined in thought than longer prepared submissions, including spontaneous and fun ideas.
- They could provide a catalyst for social innovation. Messages were hared publicly could be enacted by people beyond government bodies.
- Uncovering the community's cool, natural lingo
- Discovering community issues and hotspots, some of these not being previously recognised.
- It was targeted to a specific location and the directly to the users of those spaces.
- Talking versus texting – some individuals preferred to send a message to the screen rather than interact with the planners in attendance at the display. The "freedom to participate on their own terms" and not get tangled in conversation was noted as important to these contributors.

The negative aspects were outlined as:

- The brevity of the messages could mean that they lacked the full scope of the issue of concern being raised.
- While the brief message could be useful to planners it could also be lacking context.
- The difficulty in following up with contributors to clarify or evaluate the level of concern for issues raised.
- Planners felt that there could be a lack of control where someone might choose to bombard the system with their own personal agenda.

- Quantitative analysis and ratings was raised, particularly noting the number of messages that could be generated by the system. There could be difficulties in analysing the volume of data or comments received. It was also noted from follow-up interviews that some people might not send a message if their idea had already been posted by someone else.

Planners identified that there was a definite advantage with 'Discussions in Space' where the responses and ideas were instantly shared with a broad community and not exclusively for planners' and politicians' consideration. This added level of accountability and sharing could be explored more fully in further research.

The conclusions drawn within the paper suggest the addition of 'Discussions in Space' to the IAP2's Public Participation Toolbox (2006), and open the way to further consideration of mobile technologies and specifically development apps for community engagement on planning matters.

The following Table 4.1 demonstrates the format of the IAP2 toolbox and how Discussions in Space would fit within that structure.

TECHNIQUE	THINK IT THROUGH	WHAT CAN GO RIGHT?	WHAT CAN GO WRONG?
DISCUSSIONS IN SPACE			
Interactive public or urban screen that the general public can directly send messages to via their personal, mobile device, in response to a civic or planning related issue promoted on the screen. Messages appear on the screen in real-time for other residents to see and reflect upon.	KISS – there is not much space, nor time. Use in conjunction with information kiosk if you have to provide more information about the issue. Location and size matters (the bigger the more interaction) Type of screen (projectors are cheaper to achieve a good size, but ambient light reduces brightness and contrast dramatically) Leverage event screens in the city centre or information screens at public transport hotspots Schedule skilled moderator team Be clear about how results will be used Ideal public brainstorming tool during visioning stage	Can reach a large audience within a specific locality Encourages written responses in short text Opportunity to reach a wide variety of individuals who may not have been attracted to another format Builds community good will Conveys message of accessibility and reaching out Novelty of technique improves rate of response Users feel anonymous enough to feel comfortable answering in ways that are substantially different from the norm/out of the box. Useful for gathering input from "regular" citizens, instead of just from representatives of interest groups or those who more typically come to meetings Fosters creative ideas Promotes joint problem solving and creative thinking Participants openly share different perspectives and end up with a broader view on an issue People learn to respect and understand other peoples views Builds bridges between young digital natives (prosumers) and elder generation (consumers) Gain public support for the installation of urban screens Generate bipartisan buy-in	Topic may not capture interest of the audience (which also tells you something) May enhance public concern by increasing visibility of issues Access is limited to those in the vicinity of the screen SMS cost for some still an issue, especially students on prepaid plans Although it is anonymous, participants may not be willing to openly discuss areas of conflict because it is situated. System can potentially be spammed via SMS or Twitter (negative effects can be mitigated via blacklists) Twitter hashtag spreads on the internet (negative effects can be mitigated by changing the hashtag) Depending on location, difficult to gain critical mass necessary to keep the screen engaging Although most users are familiar with SMS, especially young demographics, it is not well suited for elder generation.

Table 4.1: Placing DIS into the IAP2 toolbox (Schroeter & Houghton 2011)

Overall planners were impressed with the possibilities that Discussions in Space presented as a planning tool. The second part of the focus groups lead to the development of the following paper which furthers the consideration of the use of digital and specially mobile ICT for community engagement.

Statement of Contribution of Co-Authors for Thesis by Published Paper

The following is the format for the required declaration provided at the start of any thesis chapter, which includes a co-authored publication.

The authors listed below have certified* that:

1. they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
2. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
3. there are no other authors of the publication according to these criteria;
4. potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit, and

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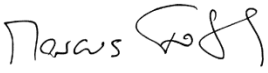
Publication title and date of publication or status:

Integrating ICT into the planning process: Impacts, opportunities and challenges
Published March 2013

Contributor	Statement of contribution*
Kirralie Houghton  15 January 2014	Wrote the manuscript, experimental design, conducted focus groups and interviews, and data analysis
Evonne Miller*	Aided experimental design, editing of manuscript
Marcus Foth*	Aided experimental design, editing of manuscript

Principal Supervisor Confirmation

I have sighted email or other correspondence from all Co-authors confirming their certifying authorship.

Assoc. Prof. Marcus Foth		15 Jan 2014
Name	Signature	Date

Integrating ICT into the planning process: Impacts, opportunities and challenges

ABSTRACT

One of the most significant lifestyle and technological trends of the twenty first century is the emergence and increased ubiquity of mobile information and communication technologies (mICT). The potential of mICT raises critical questions for planners, potentially enabling citizen engagement and enhancing the urban planning process through facilitating communication, interaction and collaboration between planning professionals and the public. To date, although technology has become integral to all functions within our urban environment, little is known about how urban planners perceive mICT and its current and potential future role in the planning process. This research explores this knowledge gap, via empirical data gathered from town planners of various sectors based in Queensland. The findings illustrate that these planners believed ICT offered strong potential to share information, creatively build community, connect with users of public spaces and adapt places in swift and temporary ways. This paper explores the issues of integrating mICT into planning practice and the affordances that these technologies offer for community consultation and placemaking. The paper aims to spark a discussion to find best ways to overcome key barriers to making ICT part of the daily practice of planning professionals including knowledge, skill, agency and time constraints.

KEY WORDS

Community engagement, mobile information, communication technologies, urban informatics, urban planning.

4.1 INTRODUCTION

The twenty first century has been defined by two key lifestyle and technological trends: rapid urbanisation and the increased accessibility and ubiquitous use of mobile information and communication technology (mICT) systems (Tibaijuka,

2009, p. 3). Increased urbanisation is placing pressure on infrastructure and lifestyle, with half of the world's population and 87% of Australians now living in cities (ABS, 2003; United Nations, 2012). At the same time, the rapid and increasing usage of mICT are changing patterns of communication and behaviour, participation and accessibility to information. In Australia, for example, smart phone traffic tripled in 2011, with the number of mobile wireless connections (excluding mobile handsets) rising to 4.8 million in June 2011 (ABS, 2011b). To date, although technology has become integral to all functions within our urban environment, little research has explored how planners – who manage and develop urban form – perceive mICT and how it might influence the form and function of cities.

Urban planning, defined as the internal ordering of cities and place-making, demands complex and organised systems as it encompasses the interplay between the needs of the city and its population (Adamson & Bunnett, 2002). Information and communication systems have always been a critical component of urban planning. Communication is vital for cities, and mobile communications are in some measure, redefining our cities (Castell & Linchuan, 2006). For urban planning, the communication with or involvement of stakeholders is a well-established principle, integral to the objectives of local area sustainability (UNCED, 1992). Linked to concepts of citizenship, choice and localisation (Parkes, 2005).

In the last decade, mICT has significantly changed socio-spatial relationships and patterns of behaviour, meaning and representation in cities. For example, mICT has blurred the lines of work time, leisure, social and community public spaces, with new flexibility and the extension of workplaces (e.g. people working on tablets in public spaces, checking and responding to emails on public transport) they are revitalising and changing interactions within the urban setting (Paay & Kjeldskov, 2007). Similarly, mICT and social media has been increasingly used within crisis management situations within cities, e.g., during the Brisbane floods in 2011 (Bruns, 2011). Such activities powerfully illustrate the potential of mICT and the emerging new intelligence of cities, which Mitchell (2007) likens to living organisms; he conceptualises ICT networks as the brains, the use of embedded sensors and tags as sensory organs, and the software as providing cognitive competence and knowledge, arguing that how these parts come and function together provides a "very significant expression of ideology, mediators of consciousness and instruments of power" (p. 5). To date, despite growing interest about how mICT might impact the practice of

urban planning and shape the design of public spaces (Shin & Shin, 2012), little is known about planners' experiences, perspectives or expectations. This paper addresses this knowledge gap, exploring the potential value of mICT for public participation and placemaking within the holistic urban informatics framework that emphases the interrelationships between people, place, and technology (Foth et al., 2011; Sheth, 2009).

Considering first the background literature for mICT and its potential for urban planning, with particular reference to public engagement and placemaking, this paper then outlines the methodology and approach of the research. The findings of planners' perceptions revealed through qualitative focus groups are presented in three themes. The themes are: firstly, the potential of ICT for planning; then, recreating place with ICT; while the third theme related to the barriers to ICT usage in the planning context. The final section of the paper discusses the findings and draws conclusions about urban planning and ICT directions.

The potential of mICT – technology and "ubiquitous or everywhere computing"

First, it is essential to acknowledge the impact of this new digitally connected society and the practical planning implications and opportunities. Today, information technology surrounds us to the extent that it is termed 'ubiquitous' (Weiser, 1993) or 'everyware' (Greenfield, 2006) computing. Although there were many initial concerns that the Internet would destroy any sense of real place (Meyrowitz, 1985), these have largely proven to be unfounded. McCullough (2004) asserts that place is not replaced but rather is reconfigured by ubiquitous computing. What we see is that ICT development went wireless and the population (no longer tethered to the desktop) ventured out into the parks, streets and plazas with laptops, smart phones and, more recently, tablets (Hampton & Gupta, 2008b). Yet although ICT (which incorporates all types of ubiquitous computing from radio-frequency identification, mobile phones, integrated infrastructure systems and surveillance cameras) provides a large amount of real-time data across an urban environment, the reality is that most planners and decision-makers do not currently utilise this information very often (Miller et al., 2011). As Dodgson and Gann (2011) explain (through a case study of the IBM Corporation's smart cities approach) this under-utilisation of data is due, in part, to the 'data deluge' and systematic complexities associated with information of,

and for the city. ICT, Dodgson and Gann (2011) argue, provides an opportunity to reframe the organisational systems of cities, their governance and collaborative planning processes. To date, however, there has been limited discussion and implementation of these technologies as it is not yet part of the contemporary planning discourse or practice.

The potential of mICT – public engagement, inclusion and participation

Second, in terms of engaging people, mICT provides a critical conduit for many social connections and interactions within the urban environment. Public consultation and engagement is a fundamental value in urban planning, with the literature rich with discussion, examples and debate about the importance of inclusion, democracy, collaboration and shared ownership within 'community' (Innes & Booher, 2004). Variously described as engagement, participation, consultation and inclusion, the effectiveness of methods varies greatly with Arnstein's (1969) classic participation ladder describing eight levels of participation, ranging from the weak level of manipulation, to strong participation where there is a measure of citizen control over process and outcomes (see also International Association for Public Participation, 2012). ICT provides a new mechanism through which planners might communicate and interact with communities: an obvious example is how the social nature of some of the most prominent Internet systems (consider Facebook, Twitter, and Foursquare) are changing the methods and expectations of communication within society. Of course, as Quick and Feldman (2011) argue, a distinction should be drawn between participation and inclusion: participation is defined as practices that involve public input into programs and policies, whilst inclusion is defined as a process of continuous community involvement resulting in co-producing the policies and programs that address public issues.

Given a growing expectation of meaningful community participation in civic and economic matters, mICT and digital media provide new and exciting ways to connect with an increasingly busy and occupied community (Coyne, 2009). There have been several interesting high-profile examples of citizen activation achieved through mICT. Coyne (2009) describes how the mobile phone and social media can develop collective agency in communities and facilitate the participatory design process, citing examples such as Obama's presidential campaign, Iranian elections of

2009, and the availability of existing social media to generate a crowd. In addition, a growing body of research has also illustrated the potential of digital media as a consultation tool as well as a potential community design tool, with projects such as Second life as an engagement tool (Foth et al., 2009; Gordon & Manosevitch, 2010), Discussions in Space (Schroeter & Houghton, 2011), and Hub2 (Gordon & Manosevitch, 2010).

'Discussions in Space' provides an example of the use of mICT for urban planning. It was used within the context of Brisbane City Council's Bright Ideas public consultation program, allowing for short text messages (or SMS) and Twitter messages to be viewed on a large screen within a public place. Schroeter and Houghton (2011) identified that its ability to engage younger 'tech-savy' community members in planning issues was an advantage for the planning engagement process. Its novelty, support of brainstorming ideas, ability to uncover 'community lingo' and picking up on community issues were also identified as advantages. One of its strengths was insitu engagement, allowing for targeted deployment, capturing the ideas of people who actively use those spaces in contrast to placeless online forums.

Wallin and Horelli (2010) also utilised the affordances of ICT and mICT for – the development of a user sensitive approach to service design for urban planning. It was aimed at embedding urban planning into a local context and everyday life. Trialed in two Finnish cities, the approach focused on an expanded notion of planning as 'a democratic process and a tool for community development' (p.779). ICT was utilised as a tool for gathering the multiple perspectives of stakeholders. The role of ubiquitous digital technology was in the creation of new mash-ups of data and the development of software applications, these were deployed across a number of platforms including mICT, personal computers and urban screens. The use of ICT technology in this project aims to realign the planning process with community aspirations for everyday life. The focus was to develop constant negotiation and interaction between stakeholders rather than a process of enforcement.

The potential of mICT – placemaking and spatiality through digitally mediated interactions

Third, there can be little doubt that ubiquitous mICT is altering people's relationships and interactions with 'place'. Although good places are built on understanding how

people interact and experience space, the potential of mICT for planning and place governance has not yet been fully explored. In part, this is because the interaction and communication of people in the urban spaces is relatively unseen, barring particular behaviours of the individual in possession of the mobile phone (Burke et al., 2006; Guzzetta & Bollens, 2003; Katz, 2006). The layer of digital information is illusive to the naked eye, and yet it holds potential to: build a community, connect us with the historical detail of place, to inform, to invite, to entertain, and entice its users in relation to the physical place, and to strategically change the use, vision and aspirations we hold for places. For example, Paay and Kjeldskov (2007) noted how social and cultural meaning is created within the context of public places by the presence and activities of people, and that this in turn developed into a sense of place. In order to inform the design of mICT they undertook a field study at Federation Square in Melbourne using rapid ethnography to understand the social experience of physical space. Three of their findings that informed their mICT design were: [1] Sharing place – finding people use past experience to make decisions about where to go; [2] Indexing place – or way finding, the data showed that physical familiarity with a place was valuable for finding your way around over the use of maps or guides; [3] Knowing the existence of other people within the space provides a 'sense of what is happening'. Based on these three aspects of people and place interactions they developed a context aware prototype mICT intervention to facilitate social interaction in the urban context.

For planners, unpacking the change and shifts of these nuances in how technologies might impact people and space, (and vice versa), is critical to any discussion about placemaking in the twenty-first century (Sheller, 2004). Unfortunately, the current reality is that there are many unanswered questions about how mICT impacts spatial awareness and placemaking (Cresswell, 2004), with no empirical research exploring planners' perspectives on the role of mICT in placemaking. Thus, through three focus groups and in-depth interviews with urban planning practitioners, this research directly addresses this knowledge gap.

4.2 METHODOLOGY

To explore and understand the current relationship between planners and the changing nature of ICT for placemaking, a series of three qualitative focus groups were held with urban planners. Based in Brisbane, Queensland, one of the fastest

growing regions in Australia, it provided a case study of a planning context under fast paced development pressures. Using the planners' own perspectives, a phenomenologist's lens that is "concerned with understanding social and psychological phenomena from the perspectives of people involved" (Welman & Kruger, 1999, p. 189), the study aimed to contextualise the perception and use of ICT for place management from a practicing urban planner's perspective, development processes and the cultural nuances of the planning profession. As Table 4.2 illustrates, the focus groups involved a total of twelve planners from a range of backgrounds including three local governments, state government, private sector consultants, community planners and educators. (Table 4.2 shows a breakdown of gender, professional perspective and ages of the participants.)

Code	Gender	Professional Perspective	Age Bracket*
UP1	Male	Local government planner	25 – 35
UP2	Female	Local government planner	25 – 35
UP3	Female	Local government planner	40 – 50
UP4	Female	Local government planner	30 – 40
UP5	Male	Local government planner	30 – 40
AC6	Female	Academic	40 – 50
AR7	Male	Architect	50 – 65
C8	Female	Community planner	25 – 40
LP9	Male	Landscape architect	30 – 40
LP10	Female	Landscape architect	25 – 35
CP11	Male	Consultant Planner	40 – 50
CP12	Male	Consultant Planner	50 – 65

***(Age estimates only)**

Table 4.2: Participant profile – gender, age and planning position

Planners were recruited through the convenience of known networks (including the Planning Institute of Australia and University contacts) to ensure a mixed sample covering the various perspectives of the profession. Potential participants were emailed and offered gift card incentives ($100) to participate and thank them for their time. The focus groups were held at the university, and ran for approximately 90 minutes each. The discussion was broken into two distinct parts. The first part focused on the potential use of location based mobile media for public consultation; a particular program for short message in-situ consultation was demonstrated and discussed ('Discussions in Space', see Schroeter & Houghton, 2011). The second part was directed at understanding how the planners currently understood and interacted with social media and other mICT media in their daily professional

context, as well as any potential or concerns they had about its use in the future. Although these areas provided a guide of key issues to be covered, a semi-structured approach was purposely utilised to ensure the focus group moderator (first author, KH) had the flexibility to probe emergent issues and adapt questions as required to fully explore and understand participants' perspectives. The sessions were videotaped for transcription and analysis, which were then transcribed and thematically analysed to identify meaningful categories or recurring themes that emerged from the data (Guest et al., 2012).

4.3 RESULTS

Through each of the focus groups it emerged that there was little, if any, current engagement of planners with the affordances of ICT in their professional practices. There was also a range in the level of exposure to mICT in daily life, which in turn affected their conceptions and understandings about the potential of, and barriers to, mICT in their planning practice.

In understanding the potential of ICT for planning, three clear sub-themes emerged. First, there was a wide spectrum of awareness about the potential of ICT, with the potential vision for mICT and urban planning greater where the planner had the personal experience in the use of technology, such as smart phones and tablets. The second theme considers the potential to recreate place with ICT. The final theme focused on barriers to the usage of ICT by planners. Planners perceived them as being their own limited agency to create and innovate, lack of knowledge, skill and time constraints.

Theme 1: The potential of ICT for planning – personal experience, potential, ownership

One key issue that kept arising for planners was the need to interpret the community's visions and aspirations for public places. Identifying ways that ICT could elicit this information from the public was discussed within each of the focus groups. All planners could foresee that there was 'something there' but the question of 'what' remained.

Planners' roles focused on gleaning community aspirations (in traditional ways) about places and balancing it with political, financial and physical limitation, as well as juggling a wide variety and sometimes opposing and contradictory visions, views

and expectations as they emerge from the community. The idea of place and ownership, progress and development were complicated by the variety of views, the role of power, of governance and competing interests in place. A clear common purpose of planning unfolded that is the 'unpacking the variety and complexity of interests' [AC 6] in order for good design to suit the community as a whole, and providing a voice for the greater community interest.

Some expressed the belief that as technology evolved community acceptance and take-up would lead the use of ICT in community engagement on its own terms, rather than proactively being initiated by councils or planners. Some planners expressed concerns about the perceived risks and questions of control over a consultation process, expressing fears that 'something may be unleashed without the control or perspective of the bigger picture' [UP5]. It was felt that like traditional media interactions, an emotive public response could facilitate an 'out of control' engagement, where issues become blown out of proportion, or the key issue is 'railroaded' by political agendas or unsubstantiated fear. There was also a concern that the overload of information limited the meaningful use of systems such as the Council twitter account, and that personalisation or streaming of the discussions were required.

> 'If you think about the way Brisbane City is engaging in Twitter at the moment, it is kind of like there is one twitter account, who wants to know necessarily about all these diverse things, there is probably a lot of diverse audiences out there, they want more tailored communication, to purpose, and to place, and to their interest. Once that diversity occurs, I think a lot more people will engage and there will be more need for public screens in public places' [UP1].

Planners also mentioned that the use of technologies to allow people to voice a reaction, to be heard, to be publicly acknowledged, they saw this as a legitimate function of community participation. The planners felt that the need to converse and debate was considered for many citizens to be less important than to be heard. One interesting example was described reflecting on a showcase artistic event where comments were projected on a live screen, an idea that could be used as a possible

means of allowing the community to voice their opinions and concerns on planning matters.

> 'In an artistic sense, a playful sense, it had a therapeutic role where people could say something and put it out there… there will be some of those spaces that will be an outlet and it is not necessarily conversation' [UP 3].

A key influence identified by planners was the question of ownership, including the reality that much of the public space of our urban environments is privately owned, for instance, shopping centres, cinemas, and entertainment places. They felt that ICT could be seen as a matter for the day-to-day management of these places, rather than the role of the urban planner. As one planner explained, "'*suburban environments are so aggressively privatised the idea of public space is very different to urban spaces, and shopping centers are the public spaces... You need platforms to raise a different kind of awareness of public space in those environments'' [AC6].*

Theme 2: Recreating place with ICT

The vision of the potential to use ICT as a tool in placemaking grew throughout the focus group discussion. As the group saw the ideas and suggestions of others, the applications and use of urban informatics in a city's environment inspired the planners' own thoughts and notions. Some had heard of ways that ICT had activated certain spaces with events like, flash mobs, 'occupy' rallies, national uprisings. The interesting point for the planners was the ability for decision makers to '*connect dots and making linkages'* from community information. As one explained, the opportunity was in '*how the public and the private owners of property are prepared to 'make' their spaces and what sort of connections are they prepared to start mapping across communities and larger catchments*' [AC6].

When thinking about relevant design considerations for public places in response to ICT one planner commented:

> 'Council is rolling out a lot more wireless to all the regional libraries where previously they only had it in metropolitan libraries, so presumably the spaces outside the libraries are going to go through a change' [UP1].

Attracting more people into places of wireless connectivity was seen as a positive way to activate place, and to put eyes on the street. The State Library of

Queensland was referred to in this context as a good example. Wi-Fi access was seen as playing '*a role in enhancing and making a place more desirable and safer*' [AR7]. In this way, Wi-Fi was identified by the planners as a potential tool to draw people into public spaces, as well as a way to discover or create new experiences that enhances the experience of place through added information which could be of historical interest, advisory, entertaining or just for socially connecting. One thought that excited younger planners particularly was a concept of '*spontaneity of place'*, where an ad hoc use of place could develop through the affordances of ICT social networks. They described how '*people become more fluid in their plans and this (was) being accelerated with Twitter and Facebook and other telephone based, immediate communications'* [UP1].

> 'There is probably going to be more things where you know you've got your iPhone that's location enabled and you've got your Facebook account and your Facebook account has got your preferences … I think there will be a lot more of that uncovering new places by digital means than previously' [UP1].

Traditionally, we see places developed in concrete and mortar, permanent and unyielding to change. Their form limits their use at any given point in time; essentially designs lack a robustness or flexibility of form. There is limited ability to change a space to be something else, to evolve and transform in relation to community needs. However, as one planner observed, ICT has the potential to enrich robustness.

> 'It does open up the opportunity to actually investigate temporal and temporary spaces, you know where you can even drive a new type of architecture where you have demountables, and big trees in pots so you can move them around. Or even new public spaces where you can move the furniture so it becomes a really engaging and interactive space, and it depends on people's moods and what they actually want to do with the space, the people who actually use it – there is a great opportunity' [UP3].

The use of space or the creation of flexible spaces is one of the most exciting and conceptually significant influences of ICT on 'place'. Planners raised the notion of flash mobs and spontaneous organisation of people as an element of interest, although they had not personally witnessed any. They suggested that their use has the potential to creatively build a community. Working with place in this way involves many players including the landowners and community, creative vision and co-

ordination for this type of activity was seen as beyond the planners' scope of professional involvement, input and agency.

Some of the participants were aware that there have been some initial attempts at incorporating ICT networks in new suburbs, through the incorporation of broadband networks into neighbourhoods, or the development of community social networks localised to the specific area. One planner suggested examples like Springfield Lakes and Craigieburn, where a community Internet network had been attempted from the beginning of development, (no further detail of success or impact was noted). Planners felt this provided an example of an important way in which ICT can aid the planning and development of urban (and regional) areas, supporting new or older developed areas. (It is noted that these early versions of intranets had limited success and were quickly outdated by social media (Arnold et al., 2003).

Theme 3: Barriers to ICT usage – agency, knowledge, skill and time constraints

Who has the agency to engage, to use, to determine what technology influences place? Within each of the focus groups, the question of agency was raised. Planners felt they were tightly controlled by regulation and process. This limited what new and innovative approaches they could use, with a sense that they often had to wait for the system or legal processes of law to catch up with technological developments. There was a feeling that the planner is given a specific set of guidelines for how they operate and beyond that they had little influence. Few of the planners within the group were able to see themselves as designers, even if they were in strategic planning roles. They saw that the development of policy or the constraints of it, made them regulators, not creators.

The discussion included legislative frameworks that govern planning, effectively establishing the level of agency of their positions. In contrast, ICT development was seen as fluid and fast paced, while moving the legislative framework is a slow and often complex process. There are many good reasons for the framework of legislation and the role it plays within a structure of civil society, but it created for planners a sense that they lacked the autonomy for creative innovation. The predominating view was that planners were often the 'meat in the sandwich', situated between politics and the community and left with the role of co-ordination and negotiation. The issue of agency was not limited to ICT development necessarily but

any type of innovation. Indeed, finding a tangible relationship between the physical environment and the digital was not something the planners had given much thought to, making the idea of how the two could potentially support and enhance each other new: until the focus group discussion, the planners' paradigm had not included a link between ICT and planning. While planners demonstrated a knowledge or interest in the types of data that might be available from other agencies or companies, such as the telecommunication sector, there was a perceived barrier in access to that information preventing further exploration of its use by planners.

> 'If Brisbane City Council could get access to that information for data of the population of Brisbane to evaluate its use to public spaces in a time sense and a number sense, we do counts, you can't get good data to argue good things and you might find where your real key good places are to do further research into those areas' [UP1].

4.4 DISCUSSION

This research has illustrated that, in spite of the development of mICT and the changing patterns of behaviours relating to them, planning as a professional practice has been slow to respond to the opportunities that new technologies afford. Yet, as the key function of planning is to coordinate community needs and views, it can potentially benefit greatly from the key affordances offered by mICT through its capacity to engage, build networks and share community knowledge. In spite of the development of information and communication technologies, and the changing patterns of behaviours relating to them, planning as a professional practice has been slow to respond to the opportunities that new media affords.

Inspiration and Exposure to Potential of ICTs

Whether it is by individual initiative or team development, a measure of leadership and vision for place, and about place, is required, as well as the supporting governance structure (Houghton, 2010). The necessary catalyst of passion and personal drive can come from planners and designers, community workers or general public. Planners, however, are in the position to see potential and act to lead people in relation to the use and perception of place. In some cases to see it within the scope of their role, that as local government increasingly becomes aware of the benefits of

placemaking, urban informatics can be used to augment community aspirations and build stronger connections with place.

However, as this research has illustrated, mICT and planning are not necessarily perceived as being linked or connected. Our sample of Brisbane based planners explained how the planning paradigm, to date, has not included the use of ICT or social media, and they had significant concerns about the agency, knowledge and ability of planners to lead in the innovation and application of ICT in public places and spaces. It was also noted that there is little or no scope to learn about mICT within the formal planning education, or as an ongoing professional development, with scope to build capacity in both of these areas. This is an area where the Planning Institute and Planning Schools can increase their offerings related to technology literacy and capabilities. There is also scope for planners to increase their dialogue with other disciplines like human computer interaction, cultural geography, locative media, urban informatics, to name a few. This can be enhanced through seminars; networks and reference support like those provided through Asia Pacific Design Library at the State Library of Queensland; technology speakers at conferences; website links and forums to share ideas and experience. Partnering with mICT designers and researchers for specific projects is another way to further understanding and experience for planners in this area. However, the most significant changes will occur, as planners start experimenting and working with various forms of mICT for themselves, including social media strategies within public participation projects and in the ongoing discussion with the communities they serve. The Finnish examples of Wallin and Horelli (2010) show a method of re-conceptualised urban planning processes through the use of ICT in order to meet the complex needs of urban centres in a globalised world. While tools such as Discussions in Space (Schroeter & Houghton, 2011) could be part of this type of development and set within a holistic approach to community engagement tailored to a specific community.

Whilst the planners saw opportunities with ICT, for community interaction on planning matters through location based mICT conversations there was a sense that leadership in this area was not their core role, and to date, they felt that the level of use within the community may not warrant expensive exploration. This response was heavily based on their own lack of experience or exposure to mICT. Three functional barriers to their involvement in ICT development included: the legislative focus of

their roles which govern and control the context and limit innovation, the existing complexity of their occupation, leaving little time for creative innovation in ICT, and limited exposure either during initial training or beyond. Developing modules of learning based around the opportunities or affordances of ICT for urban planning could serve to inform and inspire planners. These could be delivered within urban planning or urban design degrees or continuing professional education courses.

Typologies of urban informatics support

Evaluating the feedback from planners was used to develop a model for the types of uses of ICT as a support mechanism for planning. These typologies of support are broken down into three categories as illustrated in Table 4.3.

1 Technology for analysis of place – tools for understanding place **Providing and gathering up-to-date, information for planners in make informed decisions**			
Potential areas or use	**- Traffic management** **- Heritage values – record and in situ evaluate** **- Development assessment** **- Change of use – zoning and rezoning** **- Environmental monitoring**	**ICT Tools or concepts**	**- Data harvest social network for interpreting needs desires aspirations,** **- Design tools – GIS, CAD, Multimedia** **- Augmented reality – viewing data in-situ** **- Social Media: Crowd sourced information** **- Sensors - environmental monitoring**
2 Technology in Place – enhancing spaces with ICT **Providing information about spaces – crowd sourced & professionally developed**			
Potential areas or use	**- Heritage** **-Placemaking** **-Social planning / inclusions** **-Social engagement** **-Community Building and interaction**	**ICT Tools or concepts**	**- Large screens – public interaction** **- Enhancing experience in place through augmentation of place layering digital information** **- Navigation of place,** **- Games in physical place** **- Shared knowledge of place** **- Changing use of space** **- Occupation of place** **- Increased safety in place**
3 Technology for community engagement about place **Engaging community in the planning processes sharing public knowledge about places**			
Potential areas or use	**Public consultation** **Short messages** **Location based messaging** **Additions/evolution of IAP2 Toolkit**	**ICT Tools or concepts**	**- Large screens – public interaction** **- Social media - shared knowledge of place** **- Discussion boards and forums** **- Talking with community placemaking web 2.0 involving community in governance and decision making** **- Short messages systems**

Table 4.3: Typologies for ICT tools and urban planning

The first is the analysis of place in areas such as traffic management, heritage values, development assessment, where ICT can be a highly effective tool to gather data and improve our understanding of places. Secondly, its use within the context of place to enhance and enliven places while the third is about communication channels to the public. As ICT continues to develop at a fast pace, the inclusion of more potential tools will increase, but these three key typologies provide a framework within which the planner can understand and utilise these new tools and assess their merit for professional practice.

4.5 CONCLUSIONS

There is a broad range of urban planning functions, responsibilities and foci that capture the urban planners' time and attention. Concentrating on the detail and complexities of individual issues and circumstances in land use development may limit a planner's potential capacity for experimentation or innovation. Specifically in areas untested or under utilised throughout the community, such as a sophisticated level of Internet connectivity through the use of mobile phones, which is still in the early stages for most of the population. The ability to connect with the community's future visions through technology and interpreting technological trends, while having an obvious potential benefit for their work, still requires advanced development and programming to be meaningful. Much of this lies away from our training as urban planners and daily duties, hence outside of the 'comfort zone' for many colleagues. The use of ICT in planning will require a multidisciplinary approach beyond the planners' own field to incorporate human-computer interaction and related disciplines. As planners juggle the social and physical constraints with given opportunities to create patterns of place, ICTs real value will come in the development of ways of gathering the available and potential data so that it can be synthesised into functional and meaningful insights, thus assisting them in the process of place creation. There is a contrast between the rapid and constant advancement of technology on an international stage; to the localised stage of planning, which is focused on town, site or precinct specific issues, governed at a local government level. This may mean that there is no single model of application of ICT enabled projects, but a customisable approach to meet local needs is required. Community perceptions about the ease of involvement and interaction are also changing. Local governance will need to consider the ways of interacting with community to enable participation, as well as the levels of involvement and influence that can be generated through mICT and its various applications. Future research should explore what expectations are raised within the community through the facilitation of communication with mICT.

Planners generally focus on the "creation" of place, where key urban design principles (such as *www.urbandesign.gov.au*) are established and proven. How technology influences spatial design is an area under-explored and ripe for further rigorous assessment. Table 4.3 shows three key areas for ICT use within a planning

context and provides some examples of existing tools for application in these areas. This is just the beginning. With the steady growth and development in this field there will be new and exciting developments. With the application of planners' expertise, there is the potential to tailor the use and application to provide meaningful input into the planning process. Although the role of ICT in placemaking is emerging in the communication fields (Gordon & Manosevitch, 2010), much remains experimental in that few occasions of computer simulations and community involvement have led to real results in place. There is ample scope for further research that documents case studies and testing prototype development of planning with urban informatics tools. This research was limited to a relatively small number of planners in one city, with the collective experience of the group about ICT and new applications limited. This low level of exposure meant that time needed to be spent explaining and demonstrating some of the potential of ICT. Given more time, and a demonstration of a wider range of ICT possibility, the planners in our study may have envisaged further potential uses within their field.

The ability of urban planners to understand, direct and utilise the collection and flow of data will determine efficiencies or potentially to be gained by mICT. It offers a new tool for planners for shaping place, adding meaning and social connection. Now is the time for planners to consider this technological sphere, to utilise it to its full potential, directing that potential and staking a claim in the management of urban informatics. Planners need to emphasise their understandings of the systems of cities and relationships between people and place, specifically how it offers an interpretive basis for developing and utilising the wealth of urban informatics' data that is becoming more and more readily available. As the age of information and creativity burgeon into the urban environment, planners must forge new interdisciplinary relationships with ICT professionals. Given the potential impact of changing social patterns of information and communication, planners need to engage with these new technologies to understand and have an influence how they will alter our cities, our interactions, and our use of space.

Chapter 5: The Continuing Relevance of the Library as a Third Place for Users and Non-Users of IT

PUBLISHED PAPER 2

Houghton, K., Foth, M., & Miller, E. (2013). The Continuing Relevance of the Library as a Third Place for Users and Non-Users of IT: The Case of Canada Bay. *Australian Library Journal*, 62(1), 27-39.

Publication: Australian Library Institute Library Journal (Taylor and Francis)

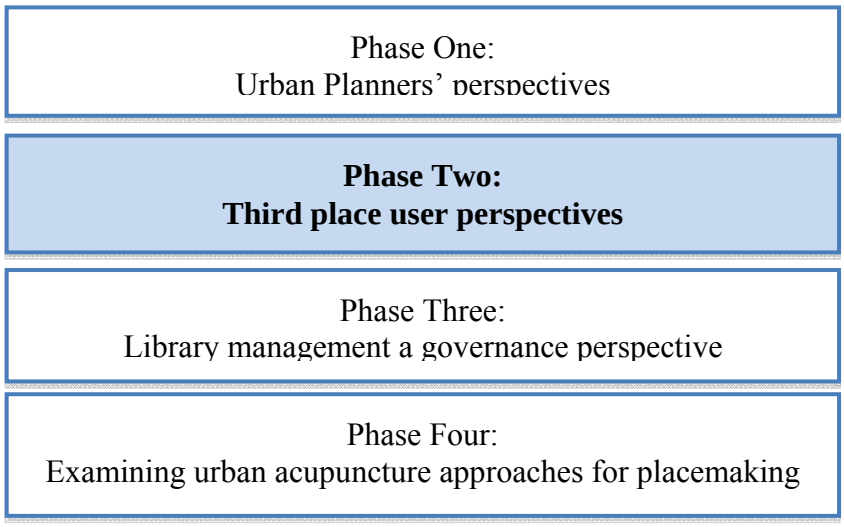
Web: *http://eprints.qut.edu.au/56428/*

http://dx.doi.org/10.1080/00049670.2013.771764

Status: Published

Year: 2013

Diagram 5.1 Thesis structure diagram: Position of paper two



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The following is the format for the required declaration provided at the start of any thesis chapter, which includes a co-authored publication.

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2. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
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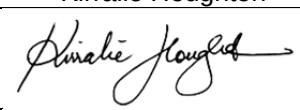
Publication title and date of publication or status:

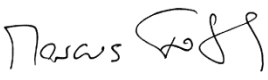
The Continuing Relevance of the Library as a Third Place for Users and Non-Users of IT: The Case of Canada Bay

Published March 2013

Contributor	Statement of contribution*
Kirralie Houghton  15 January 2014	Wrote the manuscript, experimental design, conducted focus groups and interviews, and data analysis
Marcus Foth*	Aided experimental design, editing of manuscript
Evonne Miller*	Aided experimental design, editing of manuscript

Principal Supervisor Confirmation

I have sighted email or other correspondence from all Co-authors confirming their certifying authorship.

Assoc. Prof. Marcus Foth		15 Jan 2014
Name	Signature	Date

Preamble

Following on from the establishment of the planners' perspectives of ICT, the second phase addresses the second research question:

> *How does, or could, the use of digital technology in our public urban spaces support a sense of community, belonging and the creation of meaningful places?*

A question that is highly relevant to urban planners, but in order to understand it a case study from the perspective of the users, that is the general public or community, is used to illustrate the qualities of these places. Oldenburg's discussion around the concept of 'third places' directed this phase. These third places carry the sense of community and belonging, but how is this influenced by digital technology within these physical spaces.

To better understand the third place concept and its relevance in a digital age, an exemplar was sought. While cafes and bars present as likely choices, the library offered the advantage of existing interest and links with technology, as well as observable interactions with digital technology of various types. More proactive libraries have been considering the interactions of their patrons with technology for nearly 15 years. Their experience of community and the high level of trust with which they are regarded made them a resonant choice. Two papers are presented using the library as a view of third places. The paper of this phase and chapter, directly seeks to understand the relevance of the library as a third place.

This paper makes a contributing to library sector by furthering the discussion of libraries as third places, and framing its relationships with people, place and technology. It clearly draws on issues of social capital and knowledge based societies, with kinship to community informatics. Social capital is defined and framed in works like Coleman, (1988, 2000), Portes, (2000), Leonard (Leonard & Onyx, 2004), and Middleton, Murie & Groves, (2005). The sociological view of social capital is centered on the well-established premise, that there are positive consequences for social participation in groups (Portes, 2000). Coleman describes social capital in the context of rational social actions, where each participant is also known or described as an actor, may influence, manage or control their actions (the actions are the resource measured as capital). Social capital has two aspects, firstly it is part of a social structure and secondly, it facilitates actions. To be termed capital it

must be productive, in that actions can be achieved with its presence and unattainable without it. Specific to social capital is the relationship between and amongst the actors (Coleman, 2000). These relationships are also defined as social networks.

The ethos and values of public libraries strongly supports the development of social capital within their physical places and increasingly they are looking to their virtual, online presence too. They seek to promote, construct and support existing social networks quite conscious and desirous of the social capital they will generate.

Also discussed within the paper knowledge-based societies have become a major trend in our time (Houghton & Sheehan, 2000). The challenge to governments is to encourage whole communities to participate in the digital networks to support this knowledge base. This requires both access to and understanding of digital information technologies. This paper explores the user and non-user of these technologies in the library context.

It is relevant to clarify at this point that there are many different types and scales of libraries. The focus in this study was on a mid-sized urban library. While behaviours and perceptions can be generalised to some degree across the public library sector, it is noted that scale, resources and demographics will have a bearing on the direction of libraries and the emphasis they place on varying aspects of their services. While a limitation for this study, it also presents an opportunity for further research to consider these differences across a broader sample of libraries (this occurs to some degree in the third phase of the study).

THE CONTINUING RELEVANCE OF THE LIBRARY AS A THIRD PLACE FOR USERS AND NON-USERS OF IT: THE CASE OF CANADA BAY

ABSTRACT

Purpose: The purpose of this paper is to consider how libraries support the development of community networks both physically and digitally.

Methodology: A case study methodology includes a combination of data about the library and qualitative interviews with library users considering their experience of the library.

Findings: Libraries act as third places spatially connecting people; libraries also build links with online media and play a critical role in inclusively connecting the non-technology users with the information on the Internet and about digital technology more generally.

Practical implications: The paper establishes the value of libraries in the digital age, and recommends that libraries actively seek ways to develop links between the non-technology users and activity on the Internet. It addresses the need to reach these types of non-technology users in different ways. Further, it suggests that libraries utilise their positioning as 'third places' to create broader community networks, to support local communities beyond existing users and beyond the library precinct.

IMPLICATIONS FOR BEST PRACTICE

- The physical place of the library plays a critical role in the community, but this community may not be limited to geographic or council areas.
- Connecting people with the library as a place, through social media (and other digital technologies) has the potential to broaden the community base and connection of a local area. Development in these areas requires staff development and technology resources.
- Explore options for connecting non-library users through technology; web interfaces are particularly relevant; design and integration of resources should be explored.

- Displaying and sharing social media on large screens within the library may provide an opportunity to share involve the non-technology users of the library.
- Making unfamiliar technology accessible visually is an important step for connecting some non-technology users. Libraries need to remember not all their members will be connected to these technologies.
- Communities can benefit from libraries actively investigating ways to build collaborations within their communities for small business and creative projects.

5.1 INTRODUCTION

Historically, libraries have been responsible for acquiring, managing and providing access to information. For over 6000 years they have been serving as repositories for community information (Church, 2009). The shift to online information in the digital age has forced libraries to adapt and evolve, in some cases having to justify their existence in a pervasive and infinite information environment. The continued relevance of libraries can be argued in three ways:

- They are important physical places for the community at large (Bryson et al., 2003; Buschman & Leckie, 2007; Ranseen, 2002
- They actively develop community networks and social capital (Clodfelter, 2005).
- They provide a bridge across the digital divide for those without access to technology (Russell & Jie Huang, 2009).

The purpose of this paper is to consider the ways in which libraries provide links for people into community networks, both physically and digitally. Through a case study of Concord Library, NSW a picture of the public library as a hub for community networks emerges. It asks how library users build community networks and how digital technologies support or enhance these networks. Framed in the context of people, place and technology, this paper will first present the context of libraries as social places and secondly, libraries as technology hubs. The paper uses the case study to draw conclusions on the role of the library as a community hub for

networked interactions, presented along with recommendations to build the capacity of the library in this role.

The context of libraries as social places

Libraries function in a variety of different roles, reflecting their community and its needs (Buschman & Leckie, 2007). Libraries typically offer more than just books (Griffis, 2010), they are places where people meet, socialise, and connect to community (Aabø & Audunson, 2012; Buschman & Leckie, 2007). Oldenburg (1989) would refer to them as 'third places', not home (first place), not work (second place), but one of those other places where people hang out and connect with others. Oldenburg suggests that these places are vital in that they build social capital and become the 'anchors' of community life within urban contexts. Their capacity to facilitate and foster broader, more creative interaction makes them valuable for the health, wellbeing and livability of urban environments. There are eight characteristics that Oldenburg outlines that make a 'third place':

- they are *neutral ground* and there is no obligation to stay or go;
- they are *levelers*, that is, there is a sense that social status does not matter in this space;
- the main activity in the space is *conversation*;
- these spaces are *accessible and accommodating*;
- they have *regulars* who set the mood of the place;
- third places have a *low profile*, they are not pretentious or ostentatious;
- they are rather *playful in nature*;
- they provide a level of belonging that feels like a *home away from home*.

Public libraries in many contexts display these characteristics and can be described as third places.

Libraries are places layered with meaning and stories of how learning and community have been shaped in their specific urban context. There is a growing body of knowledge about the shifting role of libraries to become social, community places (Bryson et al., 2003; Hayes & Morris, 2005; Morris, 2005). People deliberately seek out libraries as places for social connection (Bryson et al., 2003),

for leisure, for learning (Hayes & Morris, 2005), even habitat and refuge (Lincoln, 2002), and as a place to give back to the community (Fidishun, 2007).

The role of public libraries for the development of social capital and community has been an area of interest for researchers including the work of Ferguson (2012); Johnson (2010); Varheim (2009); and Hillenbrand (2005). Patronage of libraries is increasing in spite of the easy access to the Internet. People still seek out the physical library buildings for information, leisure, and social interaction, providing evidence for the importance of libraries for social capital and community development. Varheim, Steinmo, and Ide (2007b) demonstrate in their research that one of the fundamental elements of social capital is trust (Vårheim, 2007a). Their quantitative data builds the evidence that public libraries build generalised trust within communities by mixing a diverse range of individuals in a truly 'public' place that is open to all.

Libraries and technology diffusion

Libraries have a growing interest in providing access, education and literacy training to prepare the community to navigate and negotiate the digital age (Forsyth & Perry, 2010; Jehlik, 2004; Ranseen, 2002). Reducing the digital divide and ensuring adequate community access is a key motivator (Hull, 2003; Lloyd & Hellwig, 2000). As well as ensuring life-long learning for digital literacy libraries assist the community in their navigation of the new information environment. To own technology is not enough – one must be able to use it effectively for it to have value. Libraries are taking on expanded, more collaborative roles in the creation and dissemination of knowledge, a key trend of libraries in the 21st century (Given & Leckie, 2003; Jehlik, 2004). Not all library users will need this level of assistance; the experience of the self-reliant person has also been noted, this person is exploring technology and making their own discoveries (Fidishun, 2007). These users need a reliable and trustworthy source of information and user friendly designs to accommodate their information requirements.

The classic model of Roger's 'Diffusion of Innovation' (Rogers, Medina & Rivera, 2005) demonstrates the pattern of technology uptake. The first 2.5% of people are the Innovators quick to try and explore something new. Early Adopters are the next 13.5% of the population. The Early Majority then comprises the next

34% and the Late Majority is also about 34%. Finally, the Laggers make up 16% of the population who do not take up the technology until it is well established, if ever. In the library context the late adopters and 'laggers' are of critical interest as they are most at risk of being separated by a 'digital divide'. However, assumptions about the reasons for non-use should not be prematurely drawn, and to categorise all 'laggers' in the same context could be misleading in that the expectation is that all will eventually be users. We look here to the work of Satchell and Dourish (2009) who present a series of 'six forms of non-use: lagging adoption, active resistance, disenchantment, disenfranchisement, displacement, and disinterest.' Each form has their own motivation or justification for non-use and will react differently in relation to use of technology, including some who will never adopt technology (Selwyn, 2003).

In considering the library connections between people, place, and technology, understanding the relationship and cultural interpretations of early adopters and active resisters helps to understand the cultural relationships with technology (Satchell & Dourish, 2009). This case study seeks to explore the interrelationships of people, place and technology within libraries to support the effective positioning of libraries to meet these developing needs of communities.

5.2 METHODOLOGY

The use of the case study approach in this research allowed for a variety of evidence about the function of the library and the values of users to be drawn together in a concise and meaningful way. The case study as a method has the epistemological advantage that it provides a basis for naturalistic generalisation (Stake, 2009; Yin, 1994). It involves understanding the experiential context of social matters and was chosen to best relate the lived experience of the community's networked interactions in the Concord Library context.

Cresswell and Clark (2007) refer to the case study method as a means of exploring issues within a setting or context. Within this bounded system, the use of multiple data collection casts light on the setting in a multifaceted way. Yin outlines six methods for data collection in case studies, and these are shown in the following

Table 5.1. Beside Yin's six categories the corresponding data sets for this case study are listed.

Yin's case study data	**Concord Library case study data**
Documents	Canada Bay Library Services Strategy plan 2012 – 2017; State Library NSW comparison statistics. The library's review of 902 survey questionnaire responses and results of 14 focus groups conducted by library staff included in the strategy plan
Records	Minutes of community steering committee meetings
Interviews	20 in-depth, semi-structured interviews; informal conversations with librarians and café staff;
Detached Observations	From within the library.
Participant Observations	Within the strategic planning community consultation steering committee.
Physical Artifacts	The physical setting of the library and surrounds.

Table 5.1: Data sources for Concord library case study (adapted from Yin 1998)

The in–depth interviews are the focus of the case study, supported by the other data sources to contextualise and create the narrative of the Library's position. However, in order to provide contextual richness in the data analysis and to verify findings through triangulation, the other data sources (listed in Table 5.1) were also used including the findings of 14 focus groups run by library staff, and the library's community survey of 902 responses. The researcher was invited to participate in the library's strategic planning community steering committee, and given permission to make observations of these meetings as well as observations and interviews within the library. Semi-structured interviews were held with library users in the public areas of the library, over a two-day period. These varied in duration from 30 minutes to over an hour. The following Table 5.2 shows a summary of the interview participants' information. The questions were focused around the development of community networks in the library, as well as the opportunities and barriers of information and communication technologies [ICT] within the library context.

Code*	Gender	Age range^	Occupation	Main motivation for library use
P1	F	25 – 35	Parent of toddler	Story-time, café
P2	F	25 – 35	Parent of toddler	Story-time, café
P3	F	30 – 40	Student and parent	Quiet space
P4	F	20 – 30	Student	Desk space, quiet and resources
P5	M	30 – 39	Freelance worker	Desk space and cafe
P6	M	45 – 55	Worker	Internet access and social contact
P7	F	45 – 55	Part-time work	Café and borrowing books
P8	F	40 – 50	Worker	Café and borrowing books and magazines
P9	F	65 – 75	Business owner	Reading newspapers, borrowing books, author talks
P10	M	65	Semi retired – part-time work	Borrowing books and Magazines
P11	F	65 – 69	Retired	Borrowing books, author talks
P12	M	55 – 65	Retired	Meeting friends café and author talks
P13 – P20	F	60 – 89	Retired	Knitting Group

Table 5.2: Participants socio-demographic profile

The interviews were recorded, transcribed and later coded for analysis using Dedoose software and thematic coding (Guest, MacQueen and Namey 2012). Ethical clearance was obtained through the University Human Research Ethics Committee and participants were given a briefing of the research and their rights prior to obtaining their consent for interviews.

Limitations

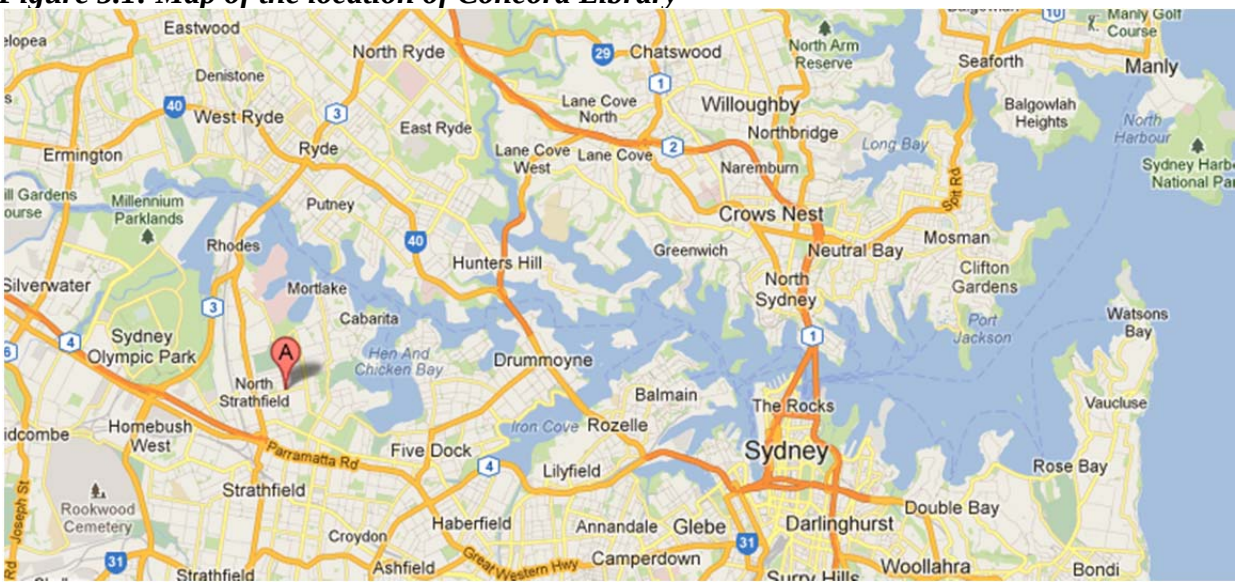
The research was limited to one library and a relatively small sample of library users (20) obtained for the in-depth interviews, limiting the breadth of the views expressed. As the research focused within the library, with existing users, it is not surprising that the perceptions presented are positive towards the library. In order to balance both of these issues and to gain a more balanced view of the library experience and non-experience, other data sources such as insights gathered from the community questionnaire that went beyond library users and covered a broader cross-section of age and gender, were used. The research also focused on active library users and did not investigate motivations for those not engaged with libraries.

5.3 THE CASE STUDY

Context of Concord Library

Canada Bay City Council is an inner Sydney metropolitan council with a population estimated at 77,010 in 2011 (Canada Bay Library Services, 2011).

Figure 5.1: Map of the location of Concord Library



The area is currently experiencing population growth and an increase in density with a number of major developments where industrial land is being converted to residential developments within the area. Concord Library is one of the two libraries to serve the local council area. The following Table 5.3 of library statistics provides a snapshot of the library size and operation.

	Canada Bay Library Service	New South Wales State averages
Visits	469,704	286,388
Staff	7 Librarians 23 All Staff	7.5 Librarians 23.71 All Staff
Expenditure	$ 2.9 million approx.	2.7million
Expenditure per capita	$36.5 approx.	$45
Computer Terminals	51	29
Computer Bookings	86,505	42,231
Computer Hours	51,312	33,867.5

Source: Adapted from NSW State Library Public Library Statistics (2011)
Table 5.3: Canada Bay Library Service Statistics

The area is linguistically and culturally diverse, and has a higher than State average take up of Internet, online services and mobile technology (Canada Bay Library Services, 2011).

Case Study Findings

The research findings are described under the headings: People, Place, Technology and Geographic Boundaries. They draw on the various data sources, presenting the narrative of the case study.

People: Building community interactions into networks

A group of eight older women gather with a buzz of chatter and the click of their needles. They have appropriated the seating on the upper level of the Concord Library and gather to knit for 'Wrap With Love' – a charitable knitting program. Some are here to '*give back*' to their community, some '*for the outing'* and another – as her friend explains – is here '*to improve her English, although she only speaks to me because I speak Italian too'* [P18]. These women meet weekly and exchange news, share health related stories and arrange social outings together. For some of them, it is where they get their main source of community information. For others, their only link with other generations as they mischievously recount how they disrupt the senior school students' study with their talking, '*they were only pretending to study'* [P13]. They also gleefully retell how they taught some younger girls to knit.

The knitting group is one of the community groups that run within the library.

It is supported by the library staff and provides a rich form of social interaction, creating social connections between these women that extend beyond the library. Similarly, the author talks run by the library were fondly referred to in interviews as a place where they meet up with people in the community with similar interests. The author talks and the high school study talks were instigators of a network of partnerships between the Library and other organisations including the local schools, bookshops and the ***Commonwealth Scientific and Industrial Research Organisation*** (***CSIRO)***. Other connections with organisations like the Smith Family charity who supported homework help for the culturally and linguistically diverse community (CALD), Wrap with Love charity and the Council's Economic Development Unit which provided the Small Business Book club were all valued by staff and community within the library's strategic direction. These connections play an important role in building community networked interactions and position the library at a physical hub of these interactions that cannot be easily replaced with an online-only counterpart.

Some of the responses to the community survey also mentioned the value of the library as a 'community hub' and it was mentioned as a gathering place for the community to meet and interact, whether for activities or events. Quoting one respondent who compared it to the ancient Greek agoras where people would meet to learn, to be entertained, to debate, '*How can I say it? Informative, it is the old agora. The agora – the meeting place for young and old'* [P9]. These events become the lived experience of the library connecting people and creating a sense of place.

Place

Many of the participants exclaimed how wonderful the new library building was. It was built in 2008, replacing two older branches, Concord and Concord West. The open plan architecture of 2030m^2 over two levels, large windows for sunlight and inclusion of a café were referred to as special features. Respondents repeatedly referred positively to the sunlight, even if they did not like other features. Compared to the '*old crowded library building'* some of the regulars noted that there was an improvement to how they felt about the library. Others had not considered visiting the old library but had been more attracted to the new building, and as one interviewee noted *'I am gob smacked, absolutely gob smacked … it is amazing and it*

is all free!' [P12]. This awe of the space meant the user found great pleasure in spending time in the space and although this was not one of the participants who used the community groups, the pleasure of the space meant he was open to spontaneous conversation and interaction with other library users. There were other interviewees who just enjoyed being in the space, '*I feel good when I come in*' [P7]. In several instances it was part of a regular weekly routine and valued as a space to spend time not particularly in relation to anyone else, but watching the activities of others provided elements of interest and vicarious socialising. The group of older men who regularly visit the library declined to talk about their routine, but others library visitors noted they were always there every week to play their board games and socialise. One respondent who used the library for online business found that the informal socialising was, for him, the important element of the library. Rather than work at home he chose to be in the library to be with others. Conversely, there were interviewees who like to remain anonymous in the library and came to the library for privacy to create a separate space of their own outside the context of home, a refuge or escape.

> *'I just want a quiet space for myself to stay away from home, telephone, parents, the children, I absolutely don't need the people'* [P3].

Another of the older men said he always came, it was part of his routine, his comments reflected a familiarity with others around him even though he chose not to engage in conversation with them.

The different expectations of individuals within the library create a complex layering of meaning for individuals in the library spaces. Finding the right balance between quiet study spaces and busy social activities was repeatedly mentioned in the community strategy meetings. As a result, the Library strategy included the installation of furniture, book shelving, and equipment that can be moved and rearranged, the purpose being to create flexible spaces that can be re-appropriated for different activities at different times.

Some interviewees liked the idea of the library providing for networking opportunities. They were actively seeking ways to collaborate and work with others. One independent worker sought out people in the library to network with, people to learn from. A woman who had just retired, suggested the library could facilitate connections for her, like high school tutoring, noting that the library offered the advantage of being a neutral safe public place for this to occur in. Observations in the

library also reveal a number of casual social interactions, serendipitous meetings with other library users who shared the location of a book or information about a service the library offered.

Technology: Opportunities and Barriers for ICT development

Through the process of developing the Library Services Strategy Plan 2012 – 2017 for both the libraries in Canada Bay City Council (Concord and Five Dock Library) a number of key values were established. These included the vision of: '*Bringing people and knowledge together. The City of Canada Bay Library Service facilitates lifelong learning by connecting the community, collections, programs and technology. We will achieve this by enabling free access to information, sharing knowledge, providing inclusive and accessible services for all, improving the popular traditional services while adapting to innovations; striving to be ethically, financially, socially and environmentally sustainable as a resilient community resource, providing adaptable and flexible spaces and services, and reflecting and enhancing the culture of the City of Canada Bay.'*

The Community Consultation Steering Committee was established to assist in the creation of the vision and the direction for the future of the library service. One of the key questions was the potential and possibility of employing new technology within the library. Some of the initial thoughts presented included:

- the use of Library apps for mobile devices,
- access to library from home via the Internet,
- the use of social networking to drive local content delivery,
- plus the use of technology within the library with opportunities such as roving reference with iPads or tablets.

Others mentioned were podcasts of author talks and online interaction with authors after the events, the curation of a community newsfeed and library activities like reference requests.

Providing links to reliable and localised information for the active technology users presented key opportunities envisaged for the library. The library has a role to provide, to curate, and support the production of local information or content. Another potential noted was a seamless and easy point of access across the library's web and catalogues.

The current use of technology within the Concord Library includes 30 public access PCs; wireless Internet access was installed in July 2011. At the time of the interviews there was no WiFi access in the library; the library has since responded by providing access across the Library. To date the limited use of social media has included Blogs and Flickr for the promotion of the local studies photograph collections. These have been supported with a digital image storage system; and access to the library's web pages via mobile device compatible formats is being developed. The library has offered computer training from time to time and some of the respondents mentioned attending these courses or a desire to do so.

> *I still have an old fashioned Nokia phone so even these new phones devices and so on – a little training centre for luddites like me would be really interesting and helpful. I wouldn't mind the opportunity in the library of actually being able to try out eBooks like the Kindle'* [P1].

Being able to use the newer technologies in the library was very appealing to some of the non-technology users who did not know much about it and had not seen its relevance to them. From the Libraries' focus groups with young families it was suggested that iPads and videos could be made available for children to use within the library.

In contrast, the library survey showed a high level of computer access across the local area. The majority of respondents (approximately 95%) had a computer or laptop connected to the Internet, just under a third (28%) had smart phones, while 10% owned iPads or tablets. The data from the survey suggested that 29.8% of respondents said they visited the library to access computers and broadband. For 51% of the respondents the Internet was their main source of community information. There was also a high rate of use of both Email (88%) and Facebook (52%) used as a means of keeping in-touch. This varied significantly between age groups and suburbs. In contrast to these figures the library users interviewed within the library were generally not as interested in Internet usage.

Amongst those interviewed all had mobile phones and used them to keep in contact with family and friends. Only three had smart phones, although there was another who was keen to try the technology and planned to upgrade with her next phone. Another was actively researching the best way to keep in contact with the emails for a trip around Australia that they were planning and looking at the smart phone as an option.

The majority of the interviewees, being disinterested in social media technologies, provided an opportunity to consider the non-user in the Case Study context, here in Table 5.4 compared against Satchell and Dourish's (2009) non-users of technology types discussed earlier.

Table 5.4 Non-users of computer technology in Concord Interviews

Non-user type	***Interviewee responses to the use of social media and smart phones***
Lagging adoption	*'I think the kids have leapfrogged us there, they have just gone straight to those smart phones and we are just playing catch-up' [P12].*
Active resistance	*'I don't use those on principle, I sort of am from a generation where my life is shared with intimate friend and not with the big world.* *It is a conservation thing, having a modestly small footprint on the earth mentality that I have; that is – do not be greedy about space and that includes computer space, (also sharing photos). It comes into the same area as Facebook and twitter and triviality…. If the photo is about, you know just the banality and triviality of everyday stuff, there actually are more significant things to think about and apply your intelligence to rather than being distracted by the mundane.' [P1].*
Disenchantment	*'I don't see the need for it. I think these things are abused. You see the kids in the schools or on the train they use it and people everywhere you go now it is on their phone call and they just go like this [touching hand to indicate touch screen]' [P10]*
Disenfranchisement	Not evident in interviews
Displacement	*'My husband does all the banking online, he learnt, but I don't use it myself' [P13].*
Disinterest	*'Maybe I won't, in the future perhaps I will try, but I am not very keen on computers' [P9].*

Some of the key reasons given for not connecting through social media were: *'it is all trivia' [P1]; 'it's a waste of time' [P10]; 'it is so unsecure' [P7]; 'it's a lot of unnecessary information' [P4].*

There was a disconnection with Internet for some of the laggers. This was raised as an issue by some of the older interviewees, especially when it came to banking and other communications that increasingly depend on Internet connectivity. While some had attended library run courses, they were still experiencing difficulties.

Others showed no interest in the current forms of technology, preferring newspapers and asking their trusted friends or librarians for information. Here the need for the library to bridge the digital divide became evident. The librarians were referred to as important sources of information. *'They are people with the knowledge – they are our gurus if I want a book I come here or some information* [P9].

Geographic boundaries to community

It became evident throughout the interviews that geographic and political boundaries did not reflect the community drawn to the library. The practice of spatiality and belonging was more closely related to the friendships, accessibility and patterns of behaviour. More important than geography was a sense of personal ownership. Careful not to take the library for granted, several interviewees noted the use of the library was a privilege, especially those not of the Canada Bay Council area, for instance, a freelance worker who commented 'this is not my library, I use it as pit stop between jobs' [P5]. Those who were from outside the local government area did not necessarily feel the right to participate in the activities of the library or to connect with the community groups (except by invitation in the case of the knitters), some even felt limited to the café for this reason.

Some of the women from the knitting group visited a different charity group, exercise club or social group every day of the week. Their practice was to invite friends along to other groups and through this process has essentially 'cross pollinated' their community networks and forged strong bonds between them.

5.4 DISCUSSION

The inter-relationships between people, place and technology are evident in the Concord library setting, with potential to further connect these elements for the benefit of the community. The findings of the research assisted in developing an understanding of how links could be made within the Concord Library context.

From the social perspective there was clear evidence of people using the library as a meeting place (Clodfelter, 2005; Vårheim, 2009). Some were seeking to find more connections both locally and online (particularly in the case of the business people). The use of social media for connection with the library or others was absent from findings; the library users had much stronger social connections in the library as

a physical place. The limited existing use of social media meant that there was little other evidence of a social media community. The Library can utilise the affordances of new technologies like social media for enhancing community connections. The content of the social media needs to be relevant and move beyond the perceptions of triviality. It must provide valued information if it is to convert some of the existing laggers interviewed in this research. Furthering the social media or online connections for community would require dedicated staff time and a strategy to build this presence.

High rates of computer ownership within the Concord area mean high rates of accessibility to technology. This can be leveraged to support the Library's involvement in the development of technology tools and connections. Further research into utilising the affordances of social media and other ICT technology could be investigated within the Concord context and beyond.

The layers of meaning within the Concord library were evident and some parts of the community have developed strong community ties, such as the knitting group. The Concord library operates as a community hub for many (Bryson et al., 2003; Clodfelter, 2005; Hayes & Morris, 2005; Morris, 2005) and for some of those it is their main link to the networked world. In the Concord context however, there is still approximately half of the population not directly linked to the local community through the library (48%). Exploring online methods of connecting with these missing community members may be warranted. The study identifies a need to create links to the online world for non-technology users who may have strong community networks but weak digital links.

The Library is ideally positioned within its community of users to facilitate social interaction on a local and global scale. As a repository of information and the knowledge of their specific community, the Concord Library has the opportunity to curate and make accessible that information both in a physical and digital space, to facilitate this interaction between people in community networks and information in a broader context. The role of libraries is far more than books (Griffis, 2010) and the opportunity exists to increase the prominence of the library as a technology and community hub as society becomes increasingly digitally connected, especially in light of National Broadband Network developments across Australia. Further research into the creation of a data platform that utilises mobile technologies and the layering of information connected to physical place is required.

The physical design of the Library plays a role in drawing people together in its public spaces. The study demonstrated Concord Library‘s role as a successful third place (Oldenburg, 1989). Both formal and informal events and connections play a part in building community within this library as well as its physical design being both comfortable and inviting. The Concord library served many as an alternative place, and a refuge from everyday life or close confines of home or work, this finding was similar to Lincoln (2002) for academic libraries. The quiet space, that is separate from intimate relationships of family or home, along with the non-intrusiveness of the library as a public space, was highly valued in these instances.

The development of strategic alliances with partner organisations is part of the Library’s Strategic plan to further develop community interaction and connectedness. The range and relationships will be specific to the library and the needs of its community. The library was seen to have a role in establishing relevant content and filtering unnecessary information for people, it was also seen as the place to go for information. This creates an ideal point of connection for multiple organisations, government agencies and community groups to build their community connections through the existing connections of the library. These potential and existing alliances work in favour of both organisations, and maximise the use of the library as a resource.

Creating visual and easy entry points to digital technology could improve access for the non-user of technology who is lagging or disenfranchised, displaced, or disinterested. Touch-screens, tablets and hands-on trialing could reduce the risk and fear of technology. Establishing strategies and training for privacy and protection to assist some laggers to connect would reassure these non-users.

The geography of community can be broad and sweep beyond the arbitrary local government lines. But ownership and sense of belonging is integral to engagement, those who felt like outsiders were less likely to engage. The perception amongst participants of what was allowable varied, so making the rules of use and access clear could promote further engagement.

There was a willingness to collaborate and even potential for more collaborations if the library were to facilitate. The library was seen as a safe place to initiate such interactions especially inter–generationally, whether for homework help or for sharing skills such as knitting. Building on these collaborations could have strong social and cultural meaning within diverse communities.

5.5 CONCLUSIONS

Libraries hold a strong position within their local communities especially amongst their regular patrons. They are physical places to visit, providing interaction with others in the community and resources for learning or creating, this tangibility gives them an advantage over purely online environments. They serve the community, both those with high levels of technological literacy and those without. The challenge for libraries is to effectively merge and leverage the position of people, place and technology interactions to provide meaning for community, relevance for technology and meaning in peoples' lives. They are safe and trusted environments for a wide range of community members.

As our society becomes more embedded in the digital knowledge economy, supporting both users and non-users of technology becomes a critical role for libraries. By providing local places, local information and local community they have the potential to be catalysts for local knowledge and technology growth within a digital society. The medium for knowledge collection has evolved, but the role of libraries as repositories of community knowledge (Church, 2009) is still as relevant as 6000 years ago.

Note

1. This paper has been double blind peer reviewed to meet the Department of Innovation, Industry, Science and Research (DIISR) HERC requirements.

Chapter 6: The local library bridging the digital and physical city

PAPER 3

Houghton, K., Miller, E., & Foth, M. (2014). The local library bridging the digital and physical city: Opportunities for economic development (May 2014)

Publication: Commonwealth Journal of Local UTS

Status: Accepted - In press

Year: 2014

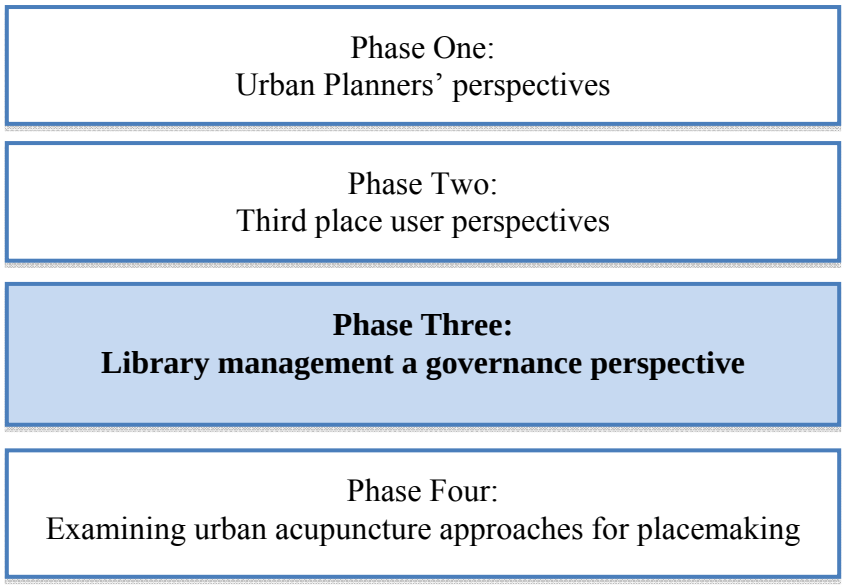


Diagram 6.1 Thesis structure diagram: Position of paper three

Statement of Contribution of Co-Authors for Thesis by Published Paper

The following is the format for the required declaration provided at the start of any thesis chapter, which includes a co-authored publication.

The authors listed below have certified* that:

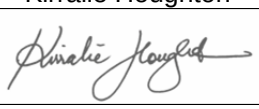
1. they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
2. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
3. there are no other authors of the publication according to these criteria;
4. potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit, and

5. they agree to the use of the publication in the student's thesis and its publication on the QUT ePrints database consistent with any limitations set by publisher requirements.

In the case of this chapter:

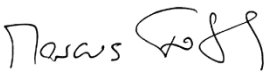
Publication title and date of publication or status:

The local library bridging the digital and physical city: Opportunities for economic Development (2014)

Contributor	Statement of contribution*
Kirralie Houghton  15 January 2014	wrote the manuscript, experimental design, conducted interviews, and data analysis
Evonne Miller*	manuscript editing, some data analysis
Marcus Foth*	manuscript editing, some data analysis

Principal Supervisor Confirmation

I have sighted email or other correspondence from all Co-authors confirming their certifying authorship.

Assoc. Prof. Marcus Foth		15 Jan 2014
Name	Signature	Date

Preamble

The high proportion of '*laggers'* and skeptical ICT users found in the library case study raised particular questions about the role of libraries for connecting communities to information and technology. On the other side of the considerations managers were calling for the use of technology and being challenged by the view that libraries would become irrelevant in a digital age.

The consideration of how *third places* could function with this divide of technology users and non-users, raises issues for place-makers keen to utilise technology to enhance, engage or re-create place. The library case study was continued to investigate how this relationship could be built with technology, its users and non-users, within the context of *place*. Understanding this aspect of the relationship between third place users, technology and *third place* was used to inform an understanding of the phenomena.

This lead to the third phase of the research to further considers the *third place* that is the public library, now from a governance (and management) perspective. It is targeted to inform both local governments and libraries in how they operate as the connection between communities and technology. The public library is a managed public space that draws together the qualities of a third place as discussed in phase two. Phase two examined the value and relevance of the public library to its users and the broad community, this third phase delves into the role of management that is governance in creating and supporting that sense of place. Phase two also discussed the role of the library as a place to link the community with technology, again this third section considers proactive ways to generate these linkages and build networked interactions with the library as a place to support them. The management, or organisational governance will influence the effectiveness of the library as a service for both the individuals and the collective community. The potential benefits include socio-economic positioning that can be capitalised with the strategic alignment of each libraries agenda in the context of regional development policy.

The paper titled '***the local library bridging the digital and physical city: Opportunities for economic development'*** has been accepted by the Commonwealth Journal of Local Governance for publication in May 2014.

The paper provides a voice from library decision makers about the implementation of strategies related to place and technology interactions. It draws from

knowledge about a wide variety of libraries across New South Wales and Queensland, picking up on some broader experience internationally from some of the experts interviewed.

What becomes evident with the development of libraries in this way is that third places can take on many roles; they can be relaxation spaces but just as easily act as community hubs, engagement spaces, or entrepreneurial incubators. The developments of networked technologies blur the lines and distinctions between uses. What cities need are good quality places that can support a range of activities, interactions and connectivity to enhance lifestyle and quality of life for urban residents. This 'de-zoning' of the city invites many questions not the subject of this research but creating opportunities for further research.

The insights shared here for the library management at both the librarian and political levels have similar qualities for translation across other local and state governance departments. They provide an example of the governed *third place* and relate to place-makers' understanding of how *people, technology* and *place* interact.

The local library bridging the digital and physical city: Opportunities for economic development

ABSTRACT

This paper considers the role of the public library as a community hub, engagement space, and entrepreneurial incubator in the context of the city, city governance, and local government planning. It considers this role from the perspective of library experts' future visions for libraries in a networked urban knowledge economy. Public libraries (often operated by or on behalf of local government) have a potential pivotal role for local governments in positioning communities within the global digital network. Fourteen qualitative interviews with library experts informed the study. The study investigates how the relationship between technology and the physical library space can potentially support the community to develop innovative, collaborative environments for transitioning to a digital future. The findings are that libraries can capitalise on their position as community hubs for two purposes: first, to build vibrant community networks and forge economic links across urban localities, and second, to cross the digital divide and act as places of innovation and lifelong learning. Libraries provide a specific combination of community and technology spaces and have significant tangible connection points in the digital age. The paper further discusses the potential benefits for libraries in using ICT networks and infrastructure, such as the National Broadband Network in Australia. These networks could facilitate greater use of library assets and community knowledge, which, in turn, could assist knowledge economies and regional prosperity.

Keywords: Libraries, national broadband, community, community hub, library governance

6.1 INTRODUCTION

The Internet and digital technologies are impacting on many aspects of modern society, from economics and politics, culture and art, science and research (OEDC, 2012). Much more than just a communication tool OECD research suggests that digital technology 'transformed into ubiquitous technology supporting all sectors across the economy' (p.5) and become a fundamental infrastructure of our time (OEDC, 2012). In response to this phenomenon, the Australian Government has developed *The National Digital Economy Strategy* (DBCDE, 2011a) and in 2011 committed to establishing a National Broadband Network (NBN) at an estimated cost of $48 billion over three years. This broadband rollout will increase the connectivity of Australians, with an estimated net economic benefit of $9.5 billion to Australia's GDP (Access Economics, 2009).

In the strategic implementation of this NBN network, a number of public libraries across the country have been chosen as central technology hubs for communities across the country, as an extension of their current roles as educators, knowledge suppliers, and community places. Research has already established that public libraries play a sometimes quiet, but significant, role in the economy. For example, in a meta-analysis of 38 studies into the economic value of libraries, Aabø (2009) estimated that for every dollar spent on libraries, they return four to five times the value to their community. Similarly, the State Library of Queensland calculates a return of $2.30 to $4.10 for every dollar spent on libraries across that state (SLQ, 2012). Contributing $295 million to the Gross State Product of Queensland, the total annual income generated was estimated to be $614 million (SLQ, 2012).

This paper explores how some public libraries are interpreting and capitalising on their changing role and envisaging ways to maximise the potential advantages of digital technology, and maintain relevance in an increasingly digital knowledge economy. Central to this study is the relationship between technology and the physical library space, and how this relationship could support the needs of the community and develop innovative, collaborative environments for transitioning to a digital future. All levels of government, and in particular local government (who in Australia are generally responsible for public library services) can investigate ways of leveraging the benefits and uses of digital technologies to position their communities for competitive advantage. Information about this critical relationship was collected using qualitative

expert interviews with policy advisors, department heads, library managers, state government consultants to libraries, and information technology (IT) librarians.

This study focuses on the opportunity to place the library as a community hub, an engagement space, and an entrepreneurial incubator within the greater context of the city, city governance, and local government planning. There are opportunities for local government to use the existing infrastructure of libraries and increase their impact on local economies by extending digital services and connections within their communities. This paper starts by presenting the supporting literature and context of libraries in the digital economy, including their role as a physical place and community hub, and the types of learning and connections they support. It then outlines the methodology and findings of the expert interviews with library managers and consultants, draws out the key implications from their perceptions and experiences in the discussion, and concludes with recommendations and directions for the positioning of libraries within city governance in the future.

6.2 LITERATURE REVIEW

The evolving needs of the digital age and digital economy

In 2009, Australia's federal government announced the National Broadband Network (NBN) initiative that would direct the future development of telecommunications across Australia (DBCDE, 2009). The aim of the initiative is to increase the nation's productivity and competitiveness, and to improve the general social wellbeing of its citizens. The digital economy, dynamic in nature, presents opportunities for Australia to engage and grow new markets and shrink the vast distances across the continent. It is noted within the Digital Economy Future Directions Final Report that infrastructure alone is not enough to generate this economy; it needs to be supported by the use and contributions of individuals across the nation (Cradduck, 2011), a view further supported by OECD (2012) research. Many of the opportunities and much of the responsibility for training the nation in preparation for the new digital future will rest with local governments. The tasks of training the nation's workforce in the relevant skills and ensuring access to technology present their own set of challenges.

To connect more Australians, a digital communities initiative will establish a number of 'Digital Hubs' in communities around Australia (shown in Table 1).

Table 6.1. Designated NBN digital hubs across Australia by state, adapted from the NBN Website (DBCDE, 2011b)

Australian Capital Territory	* Run within a library
Gungahlin	*ACT Government
New South Wales	
Armidale	*Armidale Dumaresq Council
Auburn	*Auburn City Council
Coffs Harbour	Coffs Coast Community College
Hawkesbury	The Salvation Army (State Library of NSW) Property Trust
Kiama	*Kiama Municipal Council
Penrith	*Penrith City Council
Riverstone	*Blacktown City Council
Northern Territory	
Darwin	*Darwin City Council
Queensland	
Goodna	*Ipswich City Council
Toowoomba	*Toowoomba Regional Council
Townsville	*Townsville City Council
South Australia	
Adelaide Hills	*Adelaide Hills Council
Charles Sturt	*City of Charles Sturt
Modbury	*City of Tea Tree Gully
Prospect	*City of Prospect
Salisbury	*City of Salisbury / Salisbury Library Service
Willunga	*City of Onkaparinga
Tasmania	
George Town	George Town On-line Inc.
Kingston Beach	*Kingsborough Council
Midway Point	*Pittwater Community Centre
Scottsdale	*Dorset Council
Smithton	*Circular Head Council
St Helens	*Break O'Day Council
Triabunna	*Glamorgan Spring Bay Council
Victoria	
Bacchus Marsh	Bacchus Marsh Community College Inc.
Brunswick	Brunswick Neighbourhood House
South Morang	*Yarra Plenty Regional Library Service
Western Australia	
Geraldton	*City of Greater Geraldton
Mandurah	*The City of Mandurah
Melville	*The City of Melville
Victoria Park	*Town of Victoria Park Council

*Digital hub located in a library

Source: Government Website *NBN - National Broadband Network - Australia* (DBCDE, 2011b)

These are based in areas targeted for the first NBN rollout, which has already commenced (DBCDE, 2011b). The majority of the hubs (27) are run under the auspices of local government public libraries, which emphasises a role that libraries across Australia have already assumed as digital educators, facilitating a link or bridge across the digital divide (Hull, 2003; McShane, 2011). The management and ongoing nurture of the digital hubs will reside within local government responsibilities and be closely tied to their management of local libraries. In an Australian Library and Information Association (AGIMO, 2008) survey of Internet use in libraries 37% of libraries surveyed felt that the NBN would increase the usage of their libraries (ALIA, 2012). Comments from their survey also suggested that some libraries saw that the improvements to Internet speeds through NBN would positively support the services they offered. Another name used for digital hubs has been 'community technology centres' (CTC) (Hayden & Ball-Rokeach, 2007).

In 2004, Strover, Chapman, and Waters presented research into 36 CTCs across Texas, USA. They used both qualitative and quantitative methods to evaluate the way these CTCs were established and managed. Their paper outlined the challenges of enlisting the support of multiple government departments, along with the two main assumed benefits of providing access and training in Internet technology: economic development and civic engagement. The research confirmed that the infrastructure alone was not enough to advance the use of, or to create, the economic benefits sought. The paper stressed that 'in many fundamental ways, building community is a necessary precursor to building a successful community network' (Strover, Chapman & Waters, 2004, p. 432). The paper criticised the choice of libraries and schools as places to establish CTCs. This criticism was based on two main factors: first, these institutions provided limited times of access (in the case of schools), and second, they reinforced existing power structures within communities and were, therefore, not truly public realms open to all. Newman (2007) refuted this criticism, arguing that the public library can be considered one of the last truly public realms his has been an intrinsic value of libraries since the 19th century (Cubitt, 2006; Quinn & McCallum, 2011). Public libraries provide access to information across diverse demographics and cultures (Russell & Jie Huang, 2009). Newman (2007), in her account of the public libraries (in Britain) as public realms, states that the library 'promoted an image of free and open

society' in its provision of 'access to common public culture' and 'opportunities for self education' (p. 892). Strover et al. (2004) established that locations that had other social or entertainment value to attract people were the most successful CTCs because people work best in a dynamic social environment with activity and life .

The establishment of digital hubs within public libraries acknowledges specific key characteristics of libraries: they represent the public realm (Newman, 2007); they are perceived as 'third places' or social places of community connection (Aabø & Audunson, 2012; Buschman & Leckie, 2007); they are a building block of local community (Chowdhury, Poulter & McMenemy, 2006); they are perceived as places of lifelong learning (Jehlik, 2004) and leisure (Hayes & Morris, 2005); and they are, for many, a point of connection with knowledge through a wide variety of media (Jehlik, 2004).

Proposing a new model for public libraries in a digital age, Chowdhury et al. (2006) argue that the library is in an influential position to support the creation, collection, and preservation of local community knowledge. Within their work community knowledge was seen as a dynamic and evolving process that takes libraries to a new 'Web 2.0 model'. This term is used in reference to the second generation of the World Wide Web, which is characterised by its social interaction, its dynamic nature, its ability to create online communities, and the fact that it is free. Using this model, library services are re-evaluated in light of user needs and the opportunities of new technologies (Chowdhury et al., 2006). The balance of basic computer literacy and robust infrastructure is significant if the community is to fully realise this potential – not only for social and recreational purposes, but also for economic development and regional sustainability objectives.

As knowledge becomes a key resource in this digital age (in which economies shift to knowledge-based economies), it is pertinent to understand how knowledge is acquired, generated, and expanded. This can then be applied to position local communities (and local government areas) within their strengths and establish the necessary markets to gain critical advantages.

Social connection and social learning: the role of libraries

Social connections play a major role in the process of learning, and more particularly, in the process of innovating. Tuomi (2002) argues that our social connections and behaviours are the generators of communities of practice (Wenger, McDermott &

Snyder, 2002). Once a technology has been adopted and used across society, it begins to take a meaningful role within our culturally constituted world. Culture is socially constructed; it provides a way in which we view or understand the world, including our understanding of technology such as the Internet (Tuomi, 2002). There are divergent views on the definition of culture and pinning down its exact meaning is problematic (Jahoda, 2012), here we draw on the classic work of Kroeber and Kluckhohn (1952) and consider it as a social heritage or tradition, their own definition suggests it is the patterns of behaviour, acquired and transmitted, 'constituting the distinctive achievement of human groups,' and suggesting 'culture systems may, on one hand, be considered as products of action and on the other as conditioning elements of further action' (p.181). Digital technologies are both artifacts of our culture and actions and have a bearing on our modern culture.

Bringing people together in a place (for instance, the library or a technology hub) is an effective way to generate knowledge through social engagement and practice. Creating a practice of innovation involves creating communities that share a practice or use of technology. Increasing the use of technology, or the reproduction of the social practice of technology, allows for the innovation, personalisation, or a new appropriation of a practice. This reinvention or adaptation is part of a process of creating innovation, which is encouraged when people divert resources for unintended purposes (Tuomi, 2002).

Wenger (2002) outlined seven actions that could cultivate communities of practice. Shown in Table 6.2, these actions can be applied to a range of settings, although they particularly resonate with libraries.

Table 6.2. Seven actions for cultivating communities of practice adapted Wenger (2002)

STEP	DESCRIPTION
1	**Design the community to evolve naturally.** A Community of Practice (CoP) is dynamic and subject to change in interests, goals, and members. The design of a CoP should allow for shifting focuses.
2	**Create opportunities for open dialog within the community and with outside perspectives.** Members and their knowledge are valuable, but there is benefit in looking externally for inspiration too.
3	**Welcome and allow different levels of participation**
3.1	***Core group*** – intensely committed to the group, typically the leaders of the CoP.
3.2	***Active group*** – regular attendees but do not have the same level of commitment or capability as the leaders.
3.3	***Peripheral group*** – passive participants (the majority of the community) who learn from their involvement.
4	**Develop both public and private community spaces.** Typically, CoP will operate in public places, but they also need to be able to have private exchanges. Relationships generated within CoP will be individualised and support specific non-group needs.
5	**Focus on the value of the community.** Feedback on the value and productivity of the CoP should be interwoven into its management.
6	**Combine familiarity and excitement.** Providing familiarity supports the expectations of members within a CoP. There should also be scope to explore and brainstorm both conventional and radical wisdom.
7	**Find and nurture a regular rhythm for the community.** The events and activities of the CoP should allow the members to regularly meet, reflect, and evolve. The rhythm, or pace, should maintain an anticipated level of engagement to sustain the vibrancy of the community, yet not be so fast-paced that it becomes unwieldy and overwhelming in its intensity.

By understanding these actions and building local library programs to work with them, a library can build a community of practice around: digital media, content creation, local economic development and other potential advantages of the Internet. A program needs to allow for the development of a natural evolution of community engagement, encouraging but allowing for an organic creation and re-creation over time. Local government within the context of libraries can build dialogue across the community as part of the process, which encourages participation at the three levels outlined above – core, active and peripheral.

The relationship between public and private involvement can be strengthened through the library context. The can act as library a mediator between the public and private

community stakeholders. These interactions serve to enhance the sense of community both in the digital and physical realms. The importance of both a familiar and yet dynamic or exciting hub, helps develop a regular rhythm for the local digital community hub or community of digital practice.

Blewitt and Gambles (2010) outlined the process and implementation of the Library of Birmingham's (Lobo) project to provide a place for lifelong learning for the digital age. The new Library of Birmingham (LoB) building (at a budgeted cost of £193 million) seeks to reinvent the library through new technologies and its dedication to learning, culture, arts, and commerce. The lifelong learning project is ongoing and seeks to fashion a new paradigm, interweaving physical and virtual places to create areas of high productivity and creativity. The project positions the library within its physical setting of the city, capitalising on the affordances of old and new media to develop a multi-modal and multi-spatial interface that emphasises service provision to its community. As new technologies rewrite the way we participate, learn, and engage, the planning for the new LoB presents an exciting transition for libraries that focuses on knowledge management and creation, sustainability, heritage, and cultural diversity, as well as lifelong learning (Blewitt, 2012; Blewitt & Gambles, 2010).

Libraries in the context of urban systems

Of course, public libraries do not exist in isolation. They operate within the context of local communities, cities, and wider urban systems. In addition to the emergence of digital technologies, there is increasing acknowledgment that libraries play a specific role within cities and the community as public, third places. Just as the LoB has contextualised the development of a library to meet the needs of the City of Birmingham, each community and each city needs to find its own way to create the desired lifestyle opportunities through the collective sum of its individual actions and identity. Local libraries are a central meeting point for local governments and their community. They can provide the connections to interpret, define and grow this new digital technology within communities.

Each community will need to interpret a community space, called a communication node, to reflect the authenticity and character of its physical and socio-economic environment (Zukin, 2009). In response, we need to consider the concept and adoption of a glocalisation paradigm (Robertson, 1995; Wellman, 2002). Glocalisation is a portmanteau (the joining of two terms) of globalisation and localisation. Arising from

the advent of a global network connectivity and its impact on economics and social interactions, it reflects the way in which local activities are generated, managed or represented in global contexts (Wellman & Hampton, 1999). Blewitt (2012) suggests that libraries offer significant potential to generate and offer physical and digital spaces that allow community groups to 'explore, mediate and seek creative solutions' to local issues. In this way libraries encourage creative thinking and learning – acting as a 'people's university', continuing an existing library role in a modern context. This requires a shift in the librarians' role from knowledge guardians to knowledge brokers, solution-based thinkers, mentors, and coaches. The public library's role will necessarily be an evolving one, moving from event spaces to seminar and educational uses, from health fairs to exhibitions and workspaces. Blewitt draws on Oldenburg's (1989) notion of third place. Although the Internet allows people to access information anywhere, anytime, people are looking for something more than they can achieve at home or work: they are looking for the experience that is the 'drama community' (Frischer, 2005). As is illustrated in the LoB project, many people are seeking to create a heterogeneous social space that allows for cultural freedom and the emergence of 'new political, commercial, educative, intellectual and experimental possibilities' (Blewitt, 2012).

When we re-imagine the position of libraries within our communities and urban frameworks, we need to appreciate this glocalisation effect and develop ways to support local networks within a larger global structure. City strategies are starting to incorporate global positioning and competitiveness; however, at the same time, they need to acknowledge their local context with its specific identity and needs. Inherently social creatures, we learn, innovate, and develop more when we have a social community context in which to operate (Tuomi, 2002). This research aims to establish how local governments can foster these connections and create cultures of innovations. This paper argues that libraries can contribute a novel and logical solution to this quest.

To date, little research has been undertaken into these challenges and opportunities from a library and city-strategy perspective. This paper seeks to further explore how library managers and local government policy initiators envisage and regulate the use of and development of digital technology for libraries. This study directly addresses this knowledge gap. It asks how key decision-makers and advisors of libraries perceive the changing role of these institutions. It also investigates ways to optimise the position of libraries as spaces that enable communities to participate in problem solving, engage in local issues, and increase community efficacy (Carroll & Reese, 2003). In this way, this

study seeks to conceptualise the library within the structure of a forward thinking and digitally connected city and region.

6.3 METHODOLOGY

Empirical data, in the form of qualitative expert interviews, was gathered to address the research questions. There were four linked questions:

- What are the challenges and opportunities of presenting the library as a communication node within the city structure?
- How do library managers and local government policy initiators envisage and regulate libraries as communication hubs?
- How do decision makers and stakeholders – inside and outside of libraries – perceive the changing role of libraries?
- How can libraries optimise their position as spaces that enable communities to participate and that act as innovation hubs and communication nodes within the greater context of urban environments and communities?

The use of library management experts allowed for the collection of information that reflected a depth of experience and knowledge (Brogner et al., 2009) in relation to the positioning and existing uses of libraries. The 14 interviewees included library managers, state government library advisors and consultants, a private library consultant, IT librarians, and a Local Government Association policy advisor. Interviews were held in both New South Wales and Queensland. To retain anonymity in this research, the interviewees are referred to as 'library decision-makers' and are individually coded as 'dm1' to 'dm14'. The participants were chosen for their depth of knowledge and experience within the library sector, knowledge and role in dealing with governance bodies (particularly local government), as well as their role in directing the future policy of libraries. Contact was initially made by email, and phone calls as necessary. Each interview lasted approximately an hour. Appropriate ethical clearance was obtained through the Queensland University of Technology Human Research Ethics Committee. Prior to the interview, each participant was sent information including the questions, an information sheet, and a consent form.

The interviews were semi-structured, thus allowing for inquiry into emergent issues. The questions focused on these key topics:

- the changing roles of libraries in the digital age (for community, economic development and lifelong education)
- the role and adoption of digital technology in libraries
- the implications of NBN for libraries
- the development of a sense of community in libraries
- the physical changes to libraries that relate to changing digital media.

Responses were coded and analysed in terms of the themes that emerged from within the data (Guest et al., 2012). The three key themes were the localisation of knowledge in a digitally global network; optimising and developing skills and talent; and technology resources and access. Each is discussed in turn below.

6.4 FINDINGS

> It is a time to be bold and not think that our strengths of the past, which is very much around book lending (as a great strength), are necessarily going to be the future of the library (dm7).

The library decision makers were generally positive about the future of public libraries and their ability to shift to the delivery of digital content and services. The interviewed library managers all saw the need for the library to shift its image into the digital age. E-books, Google, and library budget rationalisation all threaten to change the future direction of libraries. Although there was a comment that there was a daily need to defend the future of the library to others including politicians and the public, there was also the response, that to question the future validity of the library in a Google world has 'missed the process of evolution of libraries' (dm2). Libraries offer something quite different and so much more in terms of meaning and process.

> Libraries and books are strong. Really what sits behind that is the link between libraries and the content that is in books, which is the ideas, the thoughts, the information, the learning, the pleasure that we have historically, or traditionally, had from books, that books have reliably given us. I think it is very much the identity of the libraries, and even in the future to some extent. It is important as we transition more to this modern concept of the library and what it has always been about: learning, information, culture, and interaction. At no time in that would I say it is about a particular media. It is about how we handle this transition so we take the whole community with us (dm7).

The key aspects of these transitions were investigated in the interviews. Three themes emerged in the analysis of the data, including the localisation of knowledge, talent and skill development, and technology resources. Each theme presented specific

opportunities and barriers for the future positioning of libraries in terms of the digital technology and physical places, as perceived by the library decision-makers.

Localisation of knowledge in a digitally global network

> To some extent, the content that is in the book stock will be replaced by the content that is in people and content that is online. It is about how we fuse all that together (dm7).

Each library service is contextualised within a specific community. The library decision-makers saw that understanding and meeting the needs of the community was a responsibility and a great strength of libraries. Communities can be dynamic and evolve, and the need to keep up to date with requirements and preferences of various socio-economic and interest groups underpinned collection strategies and service provision in libraries.

> We are very interested in the multicultural community, to understand what languages they speak and also what languages they read. We buy collections in other languages when the population gets to about 2500 … we need to talk with them about what types of material they want us to supply. Is it books, magazines, or e-Books (dm7)?
>
> It is important to have staff out in those communities and they need to have a sense of service and relationship with that community (dm7).

Critically, libraries are positioning themselves by building communities that are based on the interests of their population and in their specific location. These broader community-building activities would connect with the services that libraries already provide for their local population**.** Although there are vast quantities of 'how-to' information on the Internet, these libraries still found that there was strong support for local events that encouraged learning, collecting, and sharing, including and beyond providing information about how to use technology. As one library manager commented:

> We have another program about raising chickens in your backyard (incredibly fraught with difficulties if it gets out of hand). The woman that we work with, she actually brings in some chickens. The customers tell us what makes the program so valuable is that you actually get to see the chickens as part of the learning. And they are actually meeting other people in their neighbourhood who keep chickens and they find they have a lot in common. So they have access to the expert, and they have access to the chicken, and it is extraordinary outcome. It is just so rich with information. It ticks all the boxes in how we learn, how we

> interact, how we get expert information, and it is how we learn now … I call it social learning (dm7).

A library manager also spoke of opportunities to create specific local content for the local community. This content would be designed to share the story of the local area through the eyes of the locals. The manager felt that this content creation could help build dynamic and evolving collections specific to their community. Such projects have occurred and these projects were highly localised, and set within digital technologies, taking advantage of the Internet and its connectivity. Through this type of project, libraries have become active creation spaces for locals and about local topics. What some libraries found was that 'distant others' who had an affinity with the area, or who just wanted to know more about the area, were connecting in using Internet technology. In this way, the local content could be shared globally.

> It's a global society, so people move around a lot. There are a lot of people who have been a part of the community who don't live here anymore so it [these community digital projects] give them a chance to link back to the area (dm9).

> Public libraries, because they serve a local community, which is where the library is, what we have over something like Google is a local presence. It is actually about being able to tie that local physical presence to a local digital presence. So having a world-class author presenting in the library, being able to speak to people, and being able to podcast that and then having it available digitally. It is one thing to see a world-class author online, and it is another to have a world-class author at your local library online. It is a much better feeling. Being able to have facilities that allow you to have a great experience with a great world-class speaker, and in this case an author (dm7).

Another aspect of localisation discussed was the provision of a local place to connect. This was particularly relevant for some small community libraries that combined physical elements (such as a deck overlooking a park that was accessible beyond library hours) to generate a 'dynamic community place', 'ownership', and 'fusion of outdoor and indoor activity' (dm7).

Within communities, the role of the library as a public realm that provides open access for anyone was noted. However, there were two sides to this discussion. The proponents of the free access argued that it was critical that 'everybody feels free to come into libraries – like everyone belongs, nobody is surprised to see you here' (dm6). This approach was contrasted with certain instances in which security was required within libraries to manage the behaviour of patrons and ensure the safety and comfort of others: 'We have to manage the library so they are safe for all people, so sometimes that

means removing people. That safety is not just the physical safety, but also the online safety of the community – this presents all types of challenges' (dm6).

Common to all interviews was the discussion of the library as a true public service, reaching out, and helping and engaging its local community. Libraries offered positive points of connection between community members and between community members and the local government: 'the combination of physical and local – that is our great strength. We are co-located with the community' (dm7).

The interviewed library decision makers discussed several areas of greatest risk to the future of libraries. One of these areas of risk was the potential inability of political decision-makers and non-users of libraries to shift their perceptions of the library away from books towards learning, lifestyle, and community. The interviewed library decision makers viewed the service to the local community as being far more about lifestyle support in learning, information, and entertainment, than a single media and activity (that is, books and reading). The knowledge and role of elected officials becomes particularly pertinent in terms of managing this risk and understanding the potential of digital connectivity for their communities. This needs to operate as a partnership between the politicians and management for the best results.

Optimising and developing skills or talents: staff and community

> A lot of things are about vision and leadership … in a lot of the work I do these days the things that are missing are vision or leadership and then staff development (dm14).

The interviewees acknowledged that the expertise or skills needed within the library were changing. The new role of the library in the digital age is to extend the skill set of library directors (leaders), staff, and the community. The new generation of library will need expertise that includes 'Exceptional customer service, education, events programmers, marketing, and technology capabilities' (dm6).

Library staff is already required to be flexible and customer-oriented to meet a wide range of community needs. A specific ability to pick up the latest technology and help people to access library content was also noted by the interviewees.

> We really need people who are fleet-footed, who can respond quickly to the needs of the customer, who can have any device put before them, one they have never seen before, and feel comfortable enough to sit down with the customer and work it out (dm7).

The interviewees acknowledged that libraries do not need to own all the skills: there was a role for consultants and collaborators who could meet the skill needs for specific projects, particularly if these were technology-related. In other instances, consortia between libraries may supply a skill needed; as one manager commented: 'I encourage our staff to do collaborative projects with other libraries. We are all thinking about the same things so it makes sense' (dm2). Libraries may also provide the space or place for community members to bring in their own skills. Volunteers or other service providers can be connected with the established context of the library as a place: 'For instance, we provide the space for JPs to come in and provide their volunteer services to the community' (dm7).

Some of the digital-project based events held across Australia, such as 'Libraryhack' (Libraryhack, 2012), have brought people together from a range of backgrounds with various levels of technology literacy and skills. If they are carefully planned, these events can generate real outcomes with the combination of existing databases of government information being used in new ways. This type of event has positive outcomes creating user-led computer applications, and at the same time building community, increasing the exposure of technology capabilities, and developing the creative presentation of local information.

The decision-makers described several instances in which libraries helped to support and even incubate local community service groups, such as Indigenous groups, youth support networks, and disability services. Libraries provided meeting spaces (formal and informal), along with services to encourage these local groups, and these activities were popular and highly successful. In other examples, libraries were able to support and encourage small or solo businesses to develop, sometimes by providing a workspace or meeting space, or access to information or training. One of the interviewees observed that 'libraries are moving away from a co-location model to more integration of services and support' (dm 11), which is particularly pertinent in the provision of support services across a variety of community needs.

With the rollout of the NBN, libraries have been identified as potential hubs of connectivity and education, providing training and skills for the use of technology. It has been a great opportunity for libraries, but as one interviewee said: 'this is nothing new; libraries have been training people to use the Internet and other digital technologies since 1996' (dm6). The NBN was not seen as the only determining factor

in the development of the library as a digitally connected hub, with or without NBN the libraries were experiencing the digital shift.

One of the considerations that factored into establishing training hubs was the need to avoid an institutional approach to the design of both of the physical spaces and learning material. This is important so that clients who have not been successful at school do not feel intimidated or excluded. There was a strong sense from the interviewees that community members falling into this category, with lower levels of literacy both for reading and computing, were most likely to have the greatest need for the training established in library digital hubs and that the library environment needed to welcome them.

Technology access and resources

Technology progresses, constantly changing, revised and reinvented. One interviewee noted that dealing with this technological change is one of the challenges that libraries have to meet. This includes the notion of 'perpetual beta', that is, the first release of software beyond the developer will generally still have glitches and problems in functionality:

> I think of the skills for library staff of the future is really getting their head around the concept of beta. Nothing is perfect anymore, everything to do with technology is about 80% to 90% there, but it is never perfect. By the time a technology is perfect we have moved on, it is gone, and it is about getting used to that concept (dm7).

Interviewees also identified an opportunity for libraries to work within global networks and share national and international resources. By collaborating with other libraries and organising into consortia, library decision-makers can maximise buying power and programming power to meet library needs. These efficiencies could produce not only desired product development (such as integrated cataloguing and referencing programs), but also considerable cost savings. Tied to any development of technology is the cost of 'keeping up'. This involves resourcing both the purchase of equipment and the training and maintenance that goes with it.

The issues of 'governance and perceived risk have had a limiting effect on libraries' (dm9), especially for the use of certain social media technologies. Many interviewees said this was the first year they have been allowed to use Facebook for the library. Others mentioned that they had not been able to access WiFi or certain applications because of IT policy restrictions imposed by their local government. A mentality fixed

on finding solutions rather than problems was the recommendation of the library decision-makers. They were often frustrated by the limits of perceived issues and the blanket application of policy, which had not accounted for service provision, need, and innovative solutions. According to the interviewees, these types of constraints and unnecessary difficulties inhibited innovation and the adoption of technology for and within the library.

Similarly, when operating in a 'Google world' (dm14), it was also mentioned that the integration and seamless access to the library's resources was important, especially in the digital or virtual realm. One interviewee referred to the 'the silo-ification of information' (dm9). Meaning that separate vendors, who each use different systems and license arrangements, provide various library resources that 'they don't necessarily all work together' (dm9).

Finally, several participants mentioned that libraries need to provide flexibility of space to accommodate the changing technology needs and systems: 'As books make way for technology and community connection spaces' (dm6), libraries of the future will indeed look different and will allow users to access information from different mediums. Library decision-makers saw that the future physical design of libraries was conceptually tied to the integration of community and technology. These future physical spaces will also need to relate to the digital spaces of the library in terms of access points, conversations, events, and glocalisation (a way of representing and presenting the local community within the global context). Each of the library decision-makers talked about the importance of 24-hour access to the library through the provision of the Internet. It was not seen as an additional service, but a required link.

6.5 DISCUSSION

In the digital age, spaces for physical connection still matter. In fact, the move to more social and collaborative styles of learning and innovating has put an emphasis on 'getting people together' to share experiences of place and activities that foster engagement in learning. In a globalised economy, which allows for collaboration with anyone anywhere in the world, the quality of place and experience becomes a critical point of difference for people and companies in their choice of location. This research

has demonstrated how, within the urban structure, libraries often provide this critical public third place (Aabø & Audunson, 2012; Oldenburg, 1989), operating as an intensive node of connectivity and hub of activity. Carefully positioned within a city's structure plan, libraries can play a major role in the glocalisation of community (Wellman, 2002), business, services, and knowledge. Libraries, to varying degrees, help to position the city in a broader global context and to inspire citizens and communities to connect and engage in digital economies. They can bring experts and community together to stimulate ideas, create communities of practice and grow knowledge. This creates an opportunity for local government to direct and create a global positioning for their communities within the digital realm, as well as locating it tangibly, or physically within their trust community hub – the local public library. Emphasis on funding and local priorities needs to acknowledge and build this potential positioning, to the advantage of local governments for economic development, education and service provision.

The first key finding of the research is that libraries have a dynamic future when they position themselves as the link between people and ideas, thoughts, information, for the development of knowledge, specifically as information changes its format and style of presentation in the digital realm. The evolving role of libraries will be to provide a bridge and ease the transition for the community, helping to make sense of the digital age and the opportunities that technology presents.

The potential gains of the NBN infrastructure require people to use the technology in productive ways. However, technology infrastructure means little if it is not adopted (Tuomi, 2002). Creating active examples and hands-on application opens up meaning and confidence for communities. The library examples of using and engaging communities demonstrate the benefits of social learning as a means of increasing the use of, and connection to, technology. Through socially conspired inspiration, innovation has a place to germinate and develop (Wenger et al., 2002). A culture of creation evolves. This level of social and digital connection operates well at the local level. The library managers' examples of the popularity of social-based learning projects illustrate a potential for lifelong learning in the 'public university' (Blewitt, 2012) that is the library.

The second key finding is that library decision-makers envisage ways to capitalise on their strong community connection and understanding to create communities of practice (Wenger et al., 2002) as they come to centre more on the use of technology. To

do this effectively, library decision-makers can utilise that Wenger's seven actions for cultivating communities of practice within the strategic direction of their libraries. This is critical to establishing a nurturing environment for active community learning, and includes knowing their communities and their values, providing a context for open dialogue, and allowing for varying levels of participation. The examples given by the library decision-makers also illustrate that combining the 'familiar' with elements of excitement can create dynamic places. Wenger (2002) suggests that this combination should allow scope for the exploration and brainstorming of conventional as well as radical wisdom. The library examples of bringing in external inspirations were valuable for gaining knowledge, sharing, and innovating, particularly programmed events, such as LibraryHack, and lifestyle events such as author talks, or learning about raising backyard chickens or gardening.

A third key finding identified within this research relates to how libraries extend the lifestyle and business opportunities to their local area. There is a shifting focus of the library in the age of the Internet, from containment of information in the form of physical collections, to looking outwardly at its local community and actively considering which services and programs are suitable for clients' needs. Libraries are well positioned to understand their communities from a historical perspective, with their local history collections, as well as understanding the present needs of dynamic or shifting demographics. Linking these elements has vast potential for the development of dynamic places, both physically and virtually. When considering the positioning of cities in a global context, there can be little doubt that libraries are well positioned to play a key role. Strategically defining and creating policy direction around this glocalisation role should be integrated into overall city economic and social strategies. Expanding this role has potential benefits as yet unrealized and the potential subject of further research.

This research identified how local activities focused in the library sector could connect globally through Internet technology - glocalisation (Wellman, 2002) as just the start. The discussion of ways this was actively happening across the library sector, suggest it can be a key strength for the physical presence of the library. The examples went beyond leisure activities, touching on areas of entrepreneurialism, business development, art, culture, health, and education. In regional communities, this role is particularly pertinent. Libraries, in some instances, joined with other service providers to deliver increased access. For example, councils and community services may use the

library to support their provision of face-to-face customer support. More than co-location, this was about an integration of information and service. Using libraries as knowledge places, in addition to hubs for communication and social interaction, maximises the benefit of technology across a community and saves a significant amount of money (Aabø, 2009; Aabø & Audunson, 2012). Library experts all drew on their usual practice of profiling the specific communities they serve to ensure that they develop a good understanding and strong relationship with those communities. This process allows a strong trust to build between communities and libraries. This trust opens communication and encourages involvement; trust encourages people to ask their unanswered questions, to pursue education, to reach for personal aspirations like the development of a business enterprise.

Now that technology has been freed from the tethers of the desktop and 'gone mobile', the need to provide physical places that cater for a seamless transition from leisure and entertainment to civic engagement and entrepreneurialism will have an impact on the design and function of library spaces. To meet this need, libraries are creating more flexible and informal spaces, which allow for social connection in both serendipitous and programmed events. In the socialisation of the library as a place (Aabø & Audunson, 2012), there is a further opportunity to build an interconnected hybrid of physical and virtual place, connecting people within and beyond the physical place of the library and its opening hours. The interviewees spoke of the need for 24/7 access and this fusion of the place that is the library and its digital space is an important direction for further investigation and research for libraries.

In governing the access to online content, library decision-makers were aware of concerns to minimise risk, and manage the security of that access. However, they were careful not to limit their vision of possibilities with fear of the unknown. Guidelines for management (including risk management) and an action-oriented approach to digital technologies and learning could assist in building the policy framework for implementing libraries as community network hubs.

6.6 CONCLUSIONS

In returning to the research questions, a number of conclusions can be drawn. Four key challenges have been identified for further establishing libraries as communication hubs: the public perception of the library (particularly limited views of the library simply being about books); the management of security risk (both perceived and real); constraints of digital technology (particularly the unmet vision of a truly global networked; and the cost of maintaining technology to keep up with the changing and evolving trends.

If libraries were to be further established as communication hubs, a broad range of opportunities would be presented, including:

- brokering partnerships and links with other libraries, government agencies, and key players to create strong localised networks
- enhancing community lifestyles through activity, connection, and education
- minimising the digital divide within communities and increasing access and equity
- enhancing connectivity and lifelong learning across communities
- positioning local communities within the global network and its economies.
- supporting local economic development

More-innovative libraries are already establishing policy connections within the larger strategic directions of the communities they serve. Further engagement with economic development activities and programs at both local and state government levels could potentially encourage small business enterprises, creative industries, and community organisations.

The library has the potential to become a valuable tool for assessing and sharing community aspirations and directions by acting as a physical manifestation of the community it serves. In design and physical development, this means less paper within the library and more digital technology; it means spaces for collaboration, for quiet personal work, and for the use of high quality digital tools. Within the community, the library requires high visibility, connection to community spaces, and accessibility.

Libraries have a long history of bringing people together in physical places to encourage the sharing of information, knowledge, and experience. However, the future

of the modern library is the successful integration of these existing assets with the digital world and infrastructure such as the NBN that supports it. Libraries seeking to position themselves for the next generation can mark out a niche for supporting and connecting the strong, networked community that could be realised through the NBN. It is also noted that digital technology will evolve with or without NBN and library resources will continue to move to more digitally based content.

Chapter 7: Hybrid Social and Technological Practices for Hyperlocal Placemaking

PAPER 4

Houghton, K., Foth, M., & Miller, E. (accepted). Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking.

Publication: Journal of Urban Technology – Special Issue: Urban Acupuncture

Status: Accepted

Year: 2014

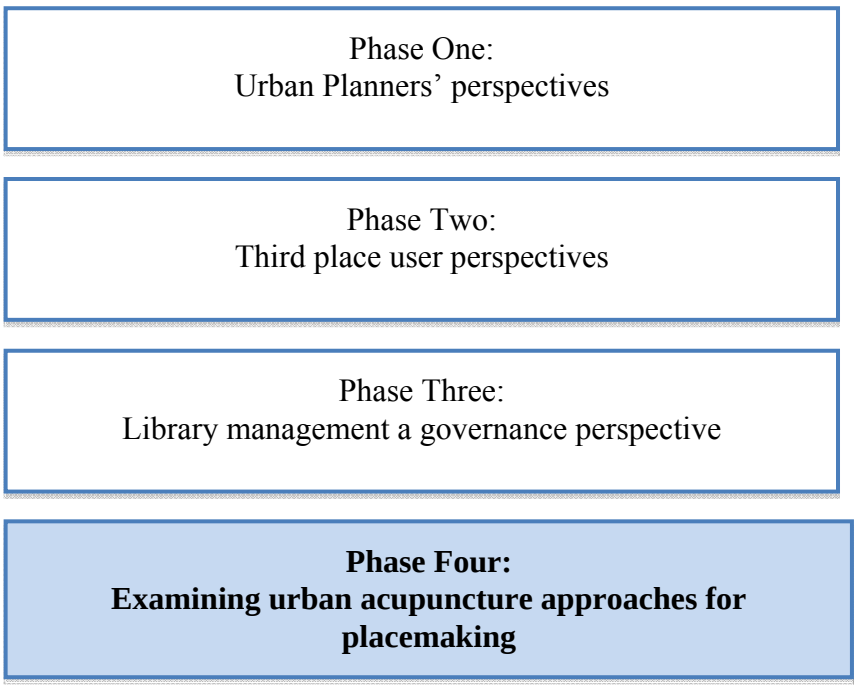


Diagram 7.1 Thesis structure diagram: Position of paper four

Preamble

This chapter presents the fourth phase and fourth publication of the thesis. It realigns the research lens to the urban planner's perspective with a paper titled '***Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking'***. Continuing from the consideration of a connected community established by the library themed case studies, this paper considers an emerging planning practice of communicative urban acupuncture.

The library examples relied heavily on the involvement for government bodies to direct and play an active role in the use and management of digital technology in order to create synergies and maximum benefits for communities. The use of digital technologies within the planning sector similarly relies heavily on government policy, establishment and effective utilisation to be beneficial for communities.

Taking a communicative planning view of the responsibilities of planning to connect and communicate with the various stakeholders, communicative urban acupuncture is examined in the next paper. It also examines the importance of place that is developed through socialising and connection with the physical context of space. The role of placemaking and governance merge in the consideration of a new way to involve and re-create public places with community participation and ownership.

Communicative urban acupuncture utilises social digitally networked connections to interact with urban places, to create and or re-create enlivened cities through community action. Appropriating an architectural term: 'urban acupuncture,' it considers how social networked interactions can work for, as well as with, a new generation of urban planning and place-making professionals. How these interactions can create synergies to reinvigorate place and create meaningful relationships within urban settings.

Urban Acupuncture activates the dynamic transformative forces of the place and focuses on the maintenance of a healthy situation rather than on the cure of problems, and thus it metaphorically resonates with the principles of the practice of acupuncture in traditional Chinese medicine.

The metaphor works well in this case study with the strategic stimulations of public space to improve vitality and the re-creation of place in underutilised urban environments. The body is the city and the needles a series of actions that stimulate

otherwise inactive or underutilised spaces. The hybrid relationship between digital and physical networked interactions, enable these actions. As in acupuncture it is not a single needle that affects a treatment, rather a careful sequencing in relation to the areas that need stimulation.

The networked interactions underpin the success of these place activations and effectively lead to the conclusions of the thesis and address the third research question:

3. How can the use of digitally networked interactions (ICT and mICT) be appropriated to support or enhance the way urban planners collaborate and work with community to create public urban places?

Statement of Contribution of Co-Authors for Thesis by Published Paper

The following is the format for the required declaration provided at the start of any thesis chapter, which includes a co-authored publication.

The authors listed below have certified* that:

1. they meet the criteria for authorship in that they have participated in the conception, execution, or interpretation, of at least that part of the publication in their field of expertise;
2. they take public responsibility for their part of the publication, except for the responsible author who accepts overall responsibility for the publication;
3. there are no other authors of the publication according to these criteria;
4. potential conflicts of interest have been disclosed to (a) granting bodies, (b) the editor or publisher of journals or other publications, and (c) the head of the responsible academic unit, and

5. they agree to the use of the publication in the student's thesis and its publication on the QUT ePrints database consistent with any limitations set by publisher requirements.

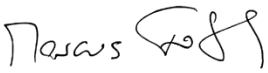
In the case of this chapter:

Publication title and date of publication or status:
Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking (Accepted 2014)

Contributor	Statement of contribution*
Kirralie Houghton  15 January 2014	Wrote the manuscript, experimental design, conducted experiments, and data analysis
Macus Foth*	Some writing and editing of manuscript
Evonne Miller*	Some writing and editing of manuscript

Principal Supervisor Confirmation

I have sighted email or other correspondence from all Co-authors confirming their certifying authorship.

Assoc. Prof. Marcus Foth		15 Jan 2014
Name	Signature	Date

Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking

Abstract

This paper considers an emerging planning practice that utilises networked connections to interact with urban places and re-create enlivened cities. The paper presents *urban acupuncture* as a new planning approach that broadens communication and strategically targets interventions across the city. Defined as an approach that through the use of digital social networks and interactions, involves citizens and planners in place activations in order to stimulate and reinvigorate place. Thus creating meaningful relationships within urban settings. This paper uses the UR[BNE] Brisbane Festival 2012 as a qualitative case study of *urban acupuncture,* best defined as a hyper-localised healing treatment through place activation to enliven and recreate cities. It examines the challenges faced and opportunities embraced by a network of urban professionals. Their aim was to activate the underused urban spaces of central Brisbane through the festival's activities and events. The findings identify the key elements required to design public spaces using socially and technologically networked interactions.

Keywords: Urban acupuncture; urban planning; place activation; urban informatics, digitally networked, social interactions,

7.1 INTRODUCTION

Globally decision-makers and planners, are grappling with the best ways to create habitable, efficient and desirable urban areas whilst managing significant population growth. The future sustainability and prosperity of cities will depend on the planning decisions made now to prepare for growth, with critical decisions needing to be made about how best to revitalise, enliven and re-create urban areas (Vassigh & vom Hove, 2012). At the same time decision-makers search for better ways to involve and engage community members in a more participatory responses to urban planning decision-making processes.

Urban decision makers, are often confronted with the competing interests of the community, politics, and various stakeholders' needs. They must balance multiple viewpoints to best serve the needs of the city and its citizens. Finding the most strategic and effective interventions, which make a real difference in communities, can often be illusive and/or, contentious (Rydin, 2003). Developing responsive environments that reflect their population's aspirations, and which are healthy and livable, requires community engagement and the development of an ongoing community dialogue. As John Rau, the current deputy premier of South Australia, argues:

> *Engagement is critical. Engagement is something that can catalyse the many disparate thoughts of individuals in the community, bringing them together into something meaningful, which can be developed for the benefit of the whole community. (5000+, 2012)*

In an age of networked interactions, there are new digital technologies that the planning profession can utilise to connect and engage with citizens. Digital Technologies and their various applications, such as social media tools (Evans-Cowley, 2010b; Fredericks & Foth, 2013) have the potential to reshape the planning process, allowing communities to convey the meaning of places in their lives, and actively engage in helping shape their urban environments (Evans-Cowley, 2010b; Shin & Shin, 2012). Shin and Shin (2012) suggest that 'community informatics' be integrated into urban planning in a conceptual framework they call 'community informatics – supporting new urbanism' (p.35). While their work theorises about the potential link between urban planning and ICT, it stops short of describing conversation and value of the hybridisation of digital and physical space. Evans-Cowley (2010a) examined the role of social media in planning communications. She found a trend to use social media in citizen-initiated action against planned developments, however it had little impact on planning decisions. In spite of capabilities of interactive communications technologies, planning communication still tends to be mono-directional supplying information from local government it may involve some responding public views, but often a very limited amount of discussion or debate (Evans-Cowley, 2010a; Williamson & Parolin, 2012).

Utilising the affordances of digital media in positive ways for planners and communities has received less academic attention. Specifically the consideration of how a hybrid approach (of digital and physical spaces interacting), can be utilised in a hyper-

local way to re-create, enliven, and activate space. Consideration of positive ways planners can be involved in the digital conversations with each other and community leaves a knowledge gap. Such activities pose significant questions for the future direction of planning and the design of new urban technology, although knowledge about how urban technology and planning might work together remains nascent.

This study is designed to contribute to addressing the knowledge gap. Using the UR[BNE] Design Collective and Festival 2012 in Brisbane, Queensland, as a qualitative case study, this study explores how urban planners and designers can engage in networked activities and use social media to help re-create and enliven city spaces. This research explores the potential of a new therapeutic approach to planning and urban re-creation: urban acupuncture, which is a hyper-localised healing treatment facilitated through digital technology for place activation to enliven and re-create cities. Designed to stimulate the city through planning and/or community guided activities in a process of reinvigorating underutilised, leftover or non-functioning spaces. It asks the following questions:

- Can urban technology and social media that enable digital networked interactions of citizens, dynamically affect the development and design of public spaces? If so, what elements need to be considered to develop and maintain these networks?

- How do these networks function within the formal structures of the planning profession in order to enhance urban places?

The principles and values of the planning profession frame the discussion, addressing the particular the role of communication and participation in planning for urban environments, and the contribution of various social media networks.

Evolving planning values

Urban planning focuses on the spatial relationships, land-use and activity across a city. It impacts on the lives and wellbeing of inhabitants, while attempting to influence and respond to the many stakeholders and their complex array of needs, desires and investments. Underlying principles of social equity and the good governance of places, citizen participation has been an integral value in planning practice since the 1960s.

There has been a shift in urban planning models from the representative style of the 1960's and 70's, to the participatory models of the 1980's (Laurian & Shaw, 2009). The communicative planning theories and new public management have been more prevalent from the 1980's to now (Healey 2012; Sager 2009).

For planners, there has been an ongoing tension between the values of communication and inclusion, and the drive for a market-driven, efficient economic management systems on the other (Sager, 2009). Sager (2009) describes the conflicting values of *Communicative Planning Theory* (CPT) and *New Public Management* (NPM) approaches to governance: CPT's focus is on multi-dimensional dialogues, and NPM uses a one-dimensional economic approach. According to Sager (2009), planners' work is tied closely with the communicative and personal value system of openness, inclusion, responsiveness to other parties' affection, the right to freedom of speech, justice, and bureaucratic neutrality.

The neo-liberal NPM approach claims that market and business rationales can be used for operating government agencies, including planning departments, with economic efficiency driving decision-making processes. The NPM and CPT approaches can be in conflict with each other: one aims for economic efficiency as its highest value and the other the process of communication (with its own implementation costs), balance and compromise (thus challenging the planners approach, decisions, and outcomes).

A CPT approach more readily allows for multiple voices and interests to be heard within the planning process and the discovery of new ways of approaching urban issues. It aligns more easily with planning values, accommodating a view that planning is more than the regulation of land use and direction of development, but rather also including processes of directing and guiding the spatial relationships between people and their environment. A collaborative, people centered, planning process as suggested in Friedmann's (2010) discussion of placemaking, adopts this approach.

It is within the context of these competing values of NTM and CPT that modern planners practice. Finding ways to reduce the cost of effective community communications can be supported by the developments and innovations of digital technology. New digital technologies provide ways to create more informal, grassroots actions to activate and enliven cities. Concerns of 'culture, consciousness, community

and ‘placeness’ (Healey, 1992) can be addressed within the CPT based approach, but must clearly be part of a planning process and philosophy to be effective.

Place activation – a planning priority

One of the key areas of consideration for planners is the impact of the development of physical building and the shaping of public places. The connotation of the term *place* is more than a physical space. It is about the meaning and connection people have with that environment (Cresswell, 2004; Tuan, 2001). There are strong connections between social capital and the development of a sense of place (which includes a sense of belonging), documented in the work of many theorists, including Goffman (1963), Jacobs (1961), Gehl (2006), Putnam (2001), and Oldenburg (1989). Others have detailed the extensive arguments about what social capital is, and what it is not (Blumberg, Peiro & Roe, 2012; Middleton, Murie & Groves, 2005; Putnam, 2001). However, the argument is established on the basis that social capital, found in the trust and networks that exist in communities. Social capital is essential for the effective functioning (Middleton et al., 2005) and the development of meaningful places (Jacobs, 1961). Ensuring that public places are active and engaging, maintaining their priority for planners and urban decision-makers. It requires the involvement and engagement of a broad range of citizens (the local residents) to be effective and sustainable (Friedmann, 2010). Using hyper-local actions to connect people with place, and in place, create energy and interest in both place and community, drawing a comparison to the urban acupuncture treatment that is the focus of this study.

Urban Acupuncture – an emerging practice

The concept of urban acupuncture borrows part of its name from ancient Chinese medicine. An analogy can be made between the work of acupuncturists and the urban planner (or community members) who target local points of influence, release a flow of energy, and thus, have a healing or ‘energising’ effect on the larger urban space or the whole city (Pascaris, 2012).

Proponents argue that urban revitalisation must begin at the hyper-local level (de Monchaux, 2010; Mehaffy, 2012; Pascaris, 2012; Shidan, 2010; Tortosa, Vicent,

Zamora & Oliver, 2010), and they advocate a targeted (small-scale) approach to 'healing' the (large-scale) malady of urban decay. They argue that large-scale revitalisation projects are both less effective and increasingly less feasible as municipal budgets tighten.

The as yet limited academic review of urban acupuncture has focused either on individual architecture elements (de Monchaux, 2010), or in the case of Shidan (2010), on the technical side of information systems such as spatial data mining techniques, geographical information systems, aerial photography, remote sensing technology, and virtual reality. From a planning perspective, there has been little or no discussion of urban technology and social media used for an urban acupuncture style process within the context of communicative planning theory. The concept of urban acupuncture for planners, which uses urban technology to generate energy, interest, and social knowledge, is the focus of this research.

The use of digital tools from social media to build community (and social capital) is also an emerging field of exploration (Evans-Cowley, 2010b; Foth, Klaebe & Hearn, 2008; Halpern, 2005; Shin & Shin, 2012). Foth et al. (2008) focus on the role that digital narratives can play in planning processes. They argue that these new social media tools have the potential to aid participation in the urban planning process, thus empowering the community in relation to their own environment (Evans-Cowley, 2010b; Fredericks & Foth, 2013; Schroeter & Houghton, 2011). Odendaal's (2006) examination of the South African experience suggests that using digital tools, such as those embedded in social media, provides a means of understanding the lived experience of urban residents from culturally and socio-economically diverse backgrounds. Odendaal and colleagues further suggest that these tools can give voice to marginalised people by incorporating ways of knowing for planning processes beyond formal reports and documents (Foth, Odendall & Hearn, 2007). In this way, urban technology has the capacity to enhance democracy because it broadens communication and the dissemination of information.

This paper considers a case study of a specific urban acupuncture treatment organised by a group of urban planners and incorporating other design professionals. It examines the potential of the group and its effectiveness in revitalising underused areas of inner-city Brisbane. Evaluating the influences of urban acupuncture actions on policy and the process of planning the City's future.

7.2 METHODOLOGY

Seeking to create a rich representation of the UR[BNE] Design Collective and Festival the case study method (Yin, 2003) was used. As Table 7.1 illustrates the research involved a series of data collection methods to explore the issues within the context of this festival in a multifaceted way and retains 'the holistic and meaningful characteristics of real life events and situations' (Yin 2003, p. 18). The University Human Research Ethics Committee provided ethical clearance, and participants were briefed on the research and their rights before consenting to be interviewed.

Table 7.1: Data Collection Methods

Interviews	Organisers of UR[BNE]	Recorded semi-structured one-hour interviews with two of the key festival organisers
Participant observation	Ideas Café Social networking sites such as Facebook, Twitter and Tumbler	Attended UR[BNE] workshops, and monitored and participated in the group's online social networks
Documentation	• Facebook • Twitter • Tumbler • Photos • Video Footage • Flyers & program	Collected and analysed data from two sources: the UR[BNE] group's own publications and postings, and online articles written by journalists

The research sought answers to key questions, both in the interviews and the analysis of other data. These included:

- How did the use of social media support and develop the UR[BNE] Festival and Design Collective?
- What were the issues that arose through the use of social media?
- Was there a relationship between the digital and physical spaces?
- Did the festival have an impact on Brisbane and the design of its public urban spaces?
- Within the formal structures of planning how do these networks function to enhance urban places?

In response to these questions and the data analysis, the case study narrative of the experience associated with the UR[BNE] Festival and Design Collective developed.

Case Study: Brisbane UR[BNE] Design Collective and Festival 2012

The Brisbane UR[BNE] Festival 2012 was run by the UR[BNE] Design Collective[2]. Brisbane is located in South East Queensland, one of the fastest growing regions in Australia. Population projections estimate growth from 2.8 million people in 2006 to 4.6 million in 2031, equating to an additional 70,600 people each year (ABS, 2011a; Office of Economic and Statistical Research, 2011). This growth rate puts pressure on the city to provide sustainable, attractive, and enlivened spaces.

The UR[BNE] design collective and festival provided examples of events and discussions that happened in both digital and physical ways. This interaction highlights the hybridization of city spaces as digital layers interact with physical spaces for the purpose of placemaking. The UR[BNE] Festival sought to implement hyper-local treatments through the underutilised spaces of the city utilising both physical and digital interventions, a month long urban acupuncture program for Brisbane.

The UR[BNE] Festival is an initiative spearheaded by three young professionals (two urban designers and a community planner) who wanted to improve the quality and use of places within Brisbane. They shared a professional interest in placemaking as a tool for enlivening cities, as a means of contextualising the spatial elements of the city. Looking at ways to develop community and a sense of place simultaneously, UR[BNE] Festival sought to create new social spaces and new ways to relate to spaces.

The UR[BNE] Collective was inspired by a number of other festivals from around the world, including those in New York, Brussels, Melbourne, London, Milan, and Amsterdam. The collective's direction is guided by its goal:

> … to bring together all manner of creative professionals, students and community members who want to contribute to a positive change in Brisbane's urban environment. By means of arts projects, campaigns and debate we seek to encourage individuals, businesses and neighbours to become involved in actions that will trigger change in our city. We offer a framework in which experience, contacts and information can be shared, a

[2] http://www.facebook.com/urbne.festival/

> forum to discuss, spread the word, and support the specific projects that activist groups or individuals have organised throughout South East Queensland. (UR{BNE}, 2012)

Embracing a grassroots approach towards place activation and planning, the UR[BNE] Design Collective was a community run initiative, independent of government bodies, although there was some small sponsorship or donations towards individual projects. While many of its members were professional planners and designers, there were no prerequisites for membership. It attracted many friends and associates who were interested in the activities and future direction of their city. The festival was the group's major activity, and its vision for the festival events was to spark interest in creating ongoing activities beyond the festival. (As discussed below, this was successfully demonstrated with the Lazy Sunday Rides and the Style over Speed events, both holding additional events beyond the festival.)

In establishing the timing for the festival, the organisers saw an advantage in connecting with a number of other events, particularly the Australian Institute of Architects conference that was also held in Brisbane in May 2012. They intended to create synergy around these events and to draw attention to the festival's events. The following Table 7.2 lists the activities connected to the festival from their official program, capturing events and activities during the month of May that celebrate Brisbane's urban spaces, community and urban design.

Table 7.2: UR[BNE] Festival 2012 Activities

Activity	Date and Description	Location and Date
Triumph of the city: a debate – Griffith University (Urban Research Program)	Wednesday 2 May	Griffith University - Nathan campus
Edible Street Tour – Permablitz	Sunday 6 May	West End Brisbane
UR[BNE] films – 4 Films over the month State Library of QLD	Inception - Sunday 6 May Radiant City - Sunday 13 May NY77 – Sunday 20 May Blade Runner Sunday 27 May	SLQ Auditorium SLiQ Flicks Asia Pacific Design Library
High Speed Rail Talk – Dept. of Infrastructure and Transport	Wednesday 9 Talk/ presentation	Novotel Hotel, Creek Street
Launch Party – Brisbane Development Association and UR[BNE]	Thursday 10 Networking event – party & discussion	Sparrow and Finch, Gresham Lane

Activity	Date and Description	Location and Date
Space Imagineers Anonymous	Informal discussions and Drinks – Three events 11, 23, 29	
Dulux emerging creative's drink and design trivia	Networking event	
Pehakucha Nigh Brisbane – AIA Special Edition	Slide presentations and talk	Powerhouse
Aperture (postcards to Brisbane) – closing part	Australian Institute of Architects National Conference	West end
Lazy Sunday Cycle	Sunday 13	Roma St and Northery St – inner Brisbane
Alleyway Project – Street Theatre (two events)	Monday 14 & Tuesday 15 Street Theatre	Winn Lane, Valley
MapAttack - UR[BNE]	Wednesday 16	
Green Star Community Tool Launch	Friday 18	
Sustainable Drinks A monthly event	Friday 18 for networking	Little Stanley Street City
Queensland Heritage Festival 2012 The National Trust of Australia	Friday 18 Food Bus Tour of Ipswich heritage architecture	Ipswich
Musical Chairs and chair bombing	Saturday 19 Guerilla tactics for street furniture	City Hall – King George Square
We Like Bikes – Brisbane City Council	Sunday 20 Newstead/ Tennerife Bikeway	
Permablitz #20 by Permablitz	Sunday 20 Planting and Education session	West End Community Gardens
Indesign up-late	Thursday 24 Talk	James St the Valley
City of Dreams Symposium	Urban Design Alliance (UDAL)	The Block Creative Industries Precinct, QUT Kelvin Grove
Changing Lanes (laneway party)	Friday 25 Networking and Art Projects including digital technology based projects.	Brookes and Hyndes St, Valley
Indie Twilight Markets – BrisStyle	Friday 25 Street Markets	King George Square, City
Style over Speed	Friday 25 Bike ride	King George Square to West End Brew Bar
Blank canvas	Friday 25 Closing event – active art on blank canvases & a range of white surfaces	Brew Bar, Burnett Lane

Activity	Date and Description	Location and Date
Plants workshop - permablitz	Saturday 26	West End Library, West End
West End Twilight Markets	Saturday 26	Boundary Street West End
Speed Date a sustainable designer Alternative Technology Assoc.	Saturday 26 Networking and learning session	State Library QLD Southbank
She'll Be Apples	Ongoing throughout May An Art installation Simple reimaging of Brisbane's backstreets	
Brisbane Park(ing) Day book launch	Sunday 27	Latrobe Terrace, Paddington
Parties in the carpark – up late designs		James Street
Games Night	Thursday 31 Giant public board games in city square	King George Square, City
Ongoing and Related Events		
Diner en blanc	1st September 2012 International event, mass crowd dining out in the city, in white.	Location a secret till the night - South Bank Brisbane
Postcards to Brisbane – wish you were here – Art Exhibition		Grey St Exhibition
Platform – RBH Busway – Art installment		
Goodbye Gallery Hello City		
Make My City Work Property Council of Australia	Online Forum	
EMAGN2012 Exhibition		
AIA National Conference		
Asia Pacific Design Library Lecture Series		
Stop for Art	Art installations on the Goodwill Bridge pedestrian/bike bridge	

While activities were not restricted to inner Brisbane, most took place either in the city or surrounding inner suburbs (shown on the following map), the two main exceptions were Griffith University Campus for the debate and Ipswich heritage tour (not shown on this map).

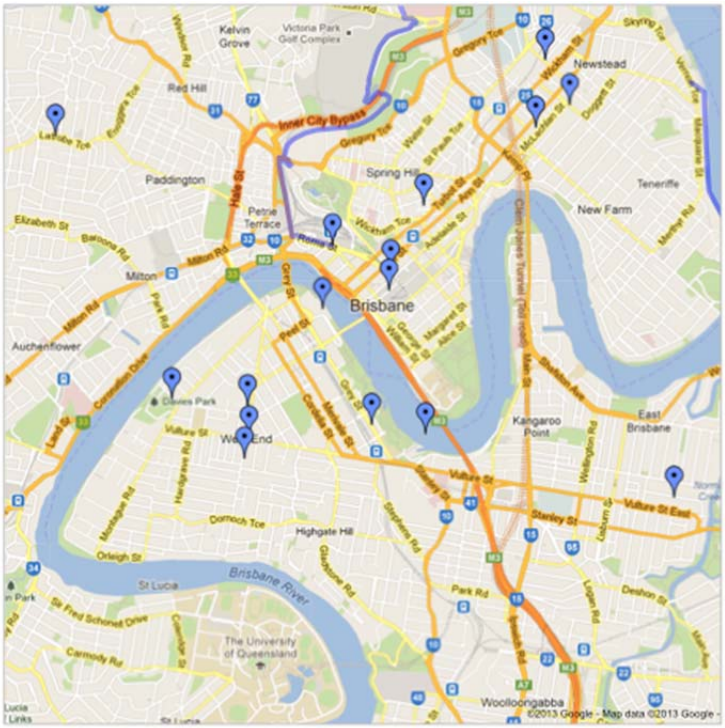


Figure 7.1: Map of inner city UR[BNE] Festival 2012 activities

7.3 FINDINGS: THE UR[BNE] DESIGN COLLECTIVE AND FESTIVAL 2012

The UR[BNE] Design Collective and Festival 2012 provide rich examples of interactions between planning and urban design professionals, artists and community who want to re-invigorate the underutilised parts of the city. As one of the interviewees from the organising committee explained:

> The general idea in the beginning was to start mini urban interventions and projects in Brisbane and around Brisbane, particularly in Brisbane's underutilised public spaces. To bring awareness to spaces, to re-imagine the way we use spaces, to generate debate. Or, try to use demonstration projects to bring about a change of policy. The first six months were slow going so that is when the festival idea came into being; it gave us a deadline and coincided with a number of other activities (Int. 2).

The UR[BNE] Festival sought to have an impact in four ways: to develop dreams, to create, to build, and to enliven. They sought to engage a diverse group of people who shared this vision: creatives, academics, technology designers, artists and beyond. UR[BNE] Design Collective was able to bring these interests together and support each other.

> From the emails we were getting, people were trying to do similar things in

> Brisbane. Actually turning your idea into a reality, an event, was something people were finding really challenging. So I think the power of the UR[BNE] collective has been in that support, building confidence and networking, putting people in touch with like-minded people (Int. 2).

The UR[BNE] Design Collective represents a group of urban planners and designers interested in exploring new ways of planning, communicating and activating spaces. For some it presented an opportunity to break from frustrations of bureaucratic processes or procedures and 'do something', create an action, promote new ways to go about their professional practice.

The world café method (IAP2, 2006) was used to generate projects and interest in the UR[BNE] Festival at the Ideas Café (see Figure 7.2). The café brought together interested parties from the planning, arts, and community sectors on 1 March 2012. Widely advertised through social media, the Rabbit Hole Ideation Café was packed for the event with a diverse and excited crowd.

Figure 7.2: Images of the Ideas Café Night Source: UR[BNE] Prezi

At the Ideas Café, anyone wanting to pitch an idea was offered the opportunity. Six people stepped forward and gave a short outline of their ideas. The ideas included: an art installation in otherwise under-utilised streets or urban spaces of Brisbane using paper as the medium; a bike ride to promote cycling as an everyday mode of transport not just a lycra clad exercise event; urban camping with a mass of people sleeping out in public city places; the temporary redesign or recreation of an inner city street; and live bands performing under the north bank motorways.

Each idea was assigned a table and the people moved between these tables offering ideas for planning, logistics, funding, and support. All ideas were recorded on large sheets of blank paper. The presenters' own interest in their projects grew through the process, some reflecting on the night that it had 'just been a vague idea but now it feels like it can really happen' (observation notes). Not all the ideas from the evening came to fruition; however, notably, some such as the 'style over speed' bike ride (see Figure 7.3) and the paper art installation called 'She'll Be Apples' did during the festival in May. According to one of the interviewees: 'It was about giving people who had an idea, but didn't know how to progress it, the opportunity to get help to bring it to fruition' (Int. 1).

Figure 7.3: Photo of the first and highly successful Style Over Speed ride

The social network created through UR[BNE] drew people together face to face at this event, and discussion continued through social media afterwards. Some of the other festival events included: Edible Streets Tour, Parking Day, She'll Be Apples (art installation), Popup Lunch, Musical Chairs, Blank canvas, Dîner en Blanc, film screenings, and presentations.

Parking Day followed the pattern of the international Parking Day movement, which involves the repurposing of car-parking space to something interesting and fun that promotes other modes of transport. Parking Day is an example of how UR[BNE] often took the approach of working with existing ideas that had been successful in other cities and repurposed them for Brisbane.

She'll Be Apples, a paper art installation, was a project developed by two artists. They set out to use art to inspire people to look at the city in a new way.

> We'd consider it a success. The installation itself was made up of a couple of hundred paper apples that were cut from books and hung from trees. That the handmade nature of the installation would re-enforce the idea for showing love for the area: Who would spend hours making hundreds of apples for a street if they didn't care about the area? A. (UR[BNE] Prezi)

Turning likes into action: the challenge of social media engagement

The UR[BNE] design collective established a web presence with Facebook, Twitter and Tumbler social media networks (see Figure 7.4). One of the interviewees explained this decision: 'We had no money, we are all not-for-profit. So everything was volunteered, everything was through social media. That was the only way we could communicate' (Int. 2).

Figure 7.4: Photo of Social media sites (UR[BNE] Prezi)

Through these media, the group attracted a large number of followers. The UR[BNE] Facebook group for those interested in the organisational aspects of the festival has 74 members. The organisers commented on their learning experience in the social media with the differences between Facebook groups and Facebook events each with a distinctly different purpose. The Facebook group was a collection of people interested in the organisational aspects of the festival, as well as an ongoing professional development interest in placemaking and urban festivals. Many of the posts for this site connected to other festivals and ideas for urban spaces from around the world, it provided a place to share and store ideas that could be relevant to the Brisbane experience. The Facebook events page related specifically to the activities of the Festival including the information and news about those events.

It was evident that their use of social media evolved as the year (2012) progressed. Each event was given its own Facebook event as shown in the figure below. Links were cross-posted between events. The network was used to inform and inspire organisers, with the various events pages used to promote individual events or activities. Each event attracted other specific interest groups through Facebook (such as cyclist groups for style over speed), which encouraged participation and followers.

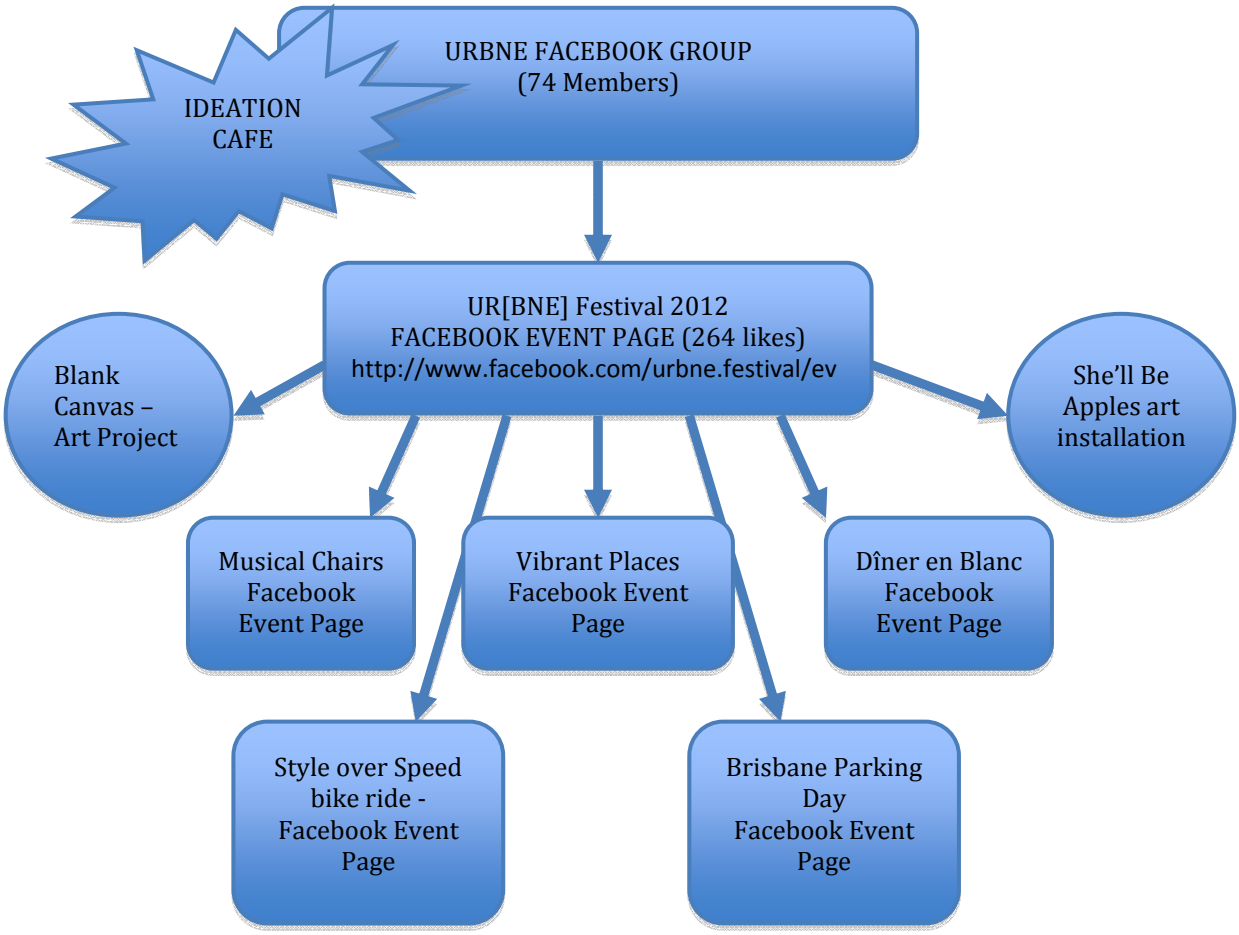


Figure 7.5: Structure of Facebook pages and groups

As mentioned in the earlier section, these followers have varying levels of commitment to the group and to social media more generally: 'One of the biggest challenges is moving from likes to action. You have a 1000 likes and only three people to do the work' (Int. 1). The three or four active organisers submitted most content posted on the Facebook site with a few other individual posts coming from other interested members or friends.

Because 2012 was the inaugural year of the UR[BNE] Festival, there were several 'teething' issues, such as discovering the most effective way to get exposure for the group's social media sites and generate public interest in using the tools on those sites. Finding the right network to connect to the right community was also a challenge.

> You have to get the mix right. The Tumbler page didn't work very well for us… We have learnt a lot since we first started using it [social media]. It is definitely a very powerful tool, but I think it is something we could have

used a lot more. You really need to stay on top of your likes and keywords. (Int. 2)

Social media was used to provide information about upcoming events and to later reflect on the events. The organisers were hoping to engender an ongoing interest in activating spaces. It was hoped that there would be enough interest in the concepts and inspiration for other people to organise and run their own events within the festival.

The Pop Up Lunch (see Figure 7.6) was the type of outcome they were after.

> Inspired by UR[BNE] Festival, a group of us at work, in collaboration with surrounding businesses, will be temporarily transforming a rather unattractive and uninviting courtyard in between our block of office buildings into a place where people choose to have lunch, hang out, have fun and get to know the neighbours. In doing so we are aiming to prompt people to rethink the purpose and current use of this everyday space, whilst creating an opportunity to bring people together, and possibly catalyse new connections/relationships. S.B (UR[BNE] Prezi)

Figure 7.6: Pop up lunch sourced from (UR[BNE] Prezi)

New professional action learning and creative inspiration

Professional action learning is demonstrated through the activities of the UR[BNE] Design Collective and Festival. The Design Collective is about places, how people interact within them, and the dynamics that are significant for people living in and experiencing them. Relationships with formal planning frameworks were established

informally by the inclusion of planners from a variety of sectors as participants in activities and events. Building awareness of the festival within Brisbane's planning sector has seen the inclusion of the UR[BNE] Festival in the City Council's design process for the 2013 Brisbane Ideas Festival. One of the organisers commented:

> … the third component [of the Ideas Festival] is a street fest. When we [*UR[BNE] and City Council*] sat down and talked about it, we said wow this is practically what we are doing with UR[BNE]. So we have decided that it makes sense that we do it together. So it will probably be as partners, so we keep that recognition. UR[BNE] is about much more than just the city centre, which the City Centre Masterplan is looking at. But we want to keep our name there so people recognise it. (Int. 2)

The activation of ideas through the UR[BNE] Festival was satisfying for the participating planners, who can sometimes be frustrated by a disconnection between ideas and change within the city. The festival provided an opportunity for individuals (both urban design professionals and the general community) to pursue passions and interests and see underused parts of the city come alive. This was achieved through art installations, activities in spaces, reinventions of spaces and temporary changes to spaces. Two examples of this were using Creek Street, a small private street for the launch party, and Pop-Up Lunch in between office buildings.

The collective promoted the festival before and after it was held, with presentations to local professional associations such as Urban Design Alliance (UDAL), Business Development Association (BDA), and Pecha Kucha Brisbane. These events served to extend the interest and social network connections for UR[BNE]. An advantage for UR[BNE] is the distinction the group received from the Brisbane City Council. Yet, the group also included members from state and local government and will be working directly with the City Council on future projects. Supported with some small sponsorship, the group had a good relationship with the local Council, which was seen to be mutually beneficial.

7.4 DISCUSSION

The UR[BNE] Design Collective and Festival provided a case study of urban designers and planners working together with the broader community to activate places. It is about urban planners enacting their planning values (Laurian & Shaw, 2009) in most cases outside of their professional roles, in practical ways. UR[BNE] offers an exciting way to

participate with the social, digital and physical elements of the city to enliven place, in ways that would hearten Jacobs (1961), Gehl (2006), and Putnam (2001). UR[BNE] demonstrates the way that urban technology (particularly social media for this discussion) affords a hybrid approach to connecting the physical and digital city.

In this case study, both physical actions and virtual interactions worked like nerves within an organism, messaging and directing. Through this network UR[BNE] was able to activate otherwise inactive places, creating an energy or stimulating the city. This urban acupuncture interaction is part of an ongoing treatment. Its positive effects within the community and the planning profession of Brisbane are evident, with its initial success encouraging plans for 2013 by both UR[BNE] and Council.

At the beginning of this paper, we asked if social networks could dynamically affect the development and design of public spaces? In response we can consider how the UR[BNE] Design Collective used social media tied specifically to events in the physical world. Social media added power and significance to place-making in each of these instances. To build community and social capital the process of sharing was explicit in the success of the festival. The events that carried on beyond the festival, such as the Style over Speed Bike Ride, demonstrate the success and connection built through the events and the social media support. Social media provided a place for ideas and thinking to be shared, contributing to ongoing professional learning and action. Social media also linked events to create face-to-face interactions and dialogue, for instance, through the movie screenings and presentations to three professional groups: Brisbane Development Association, the Urban Design Alliance, and Brisbane Petukucha.

The second question was: what elements need to be considered to develop and maintain these networks? In the UR[BNE] Design Collective levels of participation varied, there was evidence of distinct participant categories such as lurkers, champions, and creators. Lurkers are those members who look, but do not actively involve themselves in the discussion online or in contributing information. Champions support, encourage and spread the word further through their own networks, often with high levels of vested interests in the project. The highest-level organisers were the most prolific contributors to social media, and as noted by the organisers, and it took a significant commitment on their part to make it a success. Further investigation is required into the behaviour of the social media lurkers and the influence on them as professionals or community members. For example, are there benefits in using social

media platforms that allow lurkers to have a vicarious connection and time to digest the content posted before and after the events?

Creating action is powerful means of connecting social media and placemaking. UR[BNE] Urban Festival provides an example of participation moving from purely informing and consulting to engagement through action. Considering the third question: within the formal structures of planning, how do these networks function to enhance urban places?

We can see that physical involvement in placemaking connects people to place in two key ways: it provides them with an experience and sense of ownership, which add meaning to place (Oldenburg, 1989), and it provides them with a means to contribute to the improvement and positive experience of their neighbourhood (Jacobs, 1961). However, through social media, like-minded, but otherwise disconnected, professionals, artists, and community members can be connected. The connections and conversations between participants in this case study broadened the participants' perspectives about their city, its spaces and other people. The involvement of the planners from local consultancies and local and state government meant that the network provided an opportunity for debate. The conversations of the broader group of professionals and community can be engaged, acknowledged and inform the daily practice of planning across the city. This aligns with the principles of CPT (Sager, 2009) involving a much larger set of stakeholders in discussions about how cities are formed and enlivened. Communication channels become clearer, with space for more voices to be included in ongoing discussions about cities: social media also allows for the development of a culture of discussion of planning issues across a city and beyond.

In this case study, social media tools were instrumental in developing and extending the links between like-minded professionals, artists, and community members. The social media provided a forum to share ideas and to have an ongoing discussion about places. The planning professionals actively participated in activities that aimed to enliven the places throughout Brisbane that is part of their professional area of responsibility. This process created a vested interest for those planners and developed in them a deeper understanding of the elements that give meaning to those places, which in turn can be used for policy development associated with those places. The stronger communication linkages with community may help to build relationships that can facilitate discussion on issue specific planning matters as required (Evans-Cowley, 2010b).

The festival itself as well as connected social media also allowed for community involvement in an active way, discussion about issues but also physical activities within places and in the case of cycling – through places. This engagement and experience of place presents an alternative way to think about consultation, beyond words and text towards inclusive action.

The limitations of this research in terms of time and scope, leave further questions unanswered about the perceptions of participants, before and after activities. Would participants be more likely to engage in local planning matters? These could be investigated in further research.

7.5 CONCLUSIONS

There is evidence of a new wave of communication, interaction, and interdisciplinary connection occurring in Brisbane. UR[BNE] is part of a stimulus for re-energising the city to take on the challenges of a growing population and all the problems that this presents. The UR[BNE] Design Collective provides a valuable space for Brisbane's planners and community to engage in discussion, debate, and professional growth. Through a series of physical actions in inner city Brisbane, supported by an ongoing online and face-to-face community dialogue, a successful urban acupuncture treatment was applied. This presents a new approach for urban planning, a *Communicative urban acupuncture* that broadens communication outputs and inputs, augmented through digital technology (specifically ICT), and strategically targets interventions across the city. Defined as an approach that through the use of digital social networks and interactions involves citizens and planners in place activations that stimulate and reinvigorate place, in order to create meaningful relationships within urban settings.

This hybrid of physical and virtual conversations and actions has helped to enliven inner city Brisbane and beyond, gauged through the positive media and council response, interest in future festivals and plans for 2013, levels of participation and interest levels in online discussions. The Design Collective and Festival successfully worked at encouraging and supporting, the interest and energy of professionals and community to activate and enliven urban places across the city. UR[BNE] Design Collective illustrates the utility of social media to create an ongoing dialogue that

conceptualises the planning role beyond regulation and development (static physical planning) to include a more communicative action oriented process of planning and city creation (action planning and placemaking) that considers the holistic health of the city.

Chapter 8: Discussion

ICT is changing the way we view and interact with the world – both in the physical and digital realms. Urban planning has much to gain by being part of that change and embracing the opportunities it presents. Urban planning also has much to offer the developing area of ICT, with their understanding of place and the interrelationships between elements that create good places, this knowledge can inform and extend the potential of urban informatics for enlivening cities and their public places. Urban planning constantly involves the communication of ideas, plans and place management issues with the public. This experience and need of community participation can also develop a mutually beneficial relationship between ICT development and planning. To miss the opportunity to be involved in the developing area of urban informatics (the interconnection between people, place and technology) runs the risk of being left behind completely.

The multifaceted approach of this research offers a particular view of the interrelationships between people, place and technology – urban informatics. In order to develop an understanding of this relationship for the planning context, it refers to libraries, and placemaking to interpret the ICT affordances for networked interactions while also considering the connection to the physical place.

The first phase of this research developed a set of three typologies of the affordances of ICT for urban planning including technology for analysis of *place*, technology in *place,* and technology for community engagement. The continuation of the thesis has considered the importance of networked interactions within those typologies, focusing on growing community and supporting the creation of *place*. These *places* are to be special and meaningful, defining the locality while also relating to the global through the connectivity available via the Internet. The key message for urban planning and governance of cities is, to effectively utilise the properties of both the physical and digital environments to create or re-create livable, enlivened cities. This needs to be done in a way that encourages networked interactions, both between community and particularly with governance bodies, in order to actively engage the community in a sense of ownership and relationship with *place*.

This discussion section will consider the significance of networked interactions and their implications, through the four phases of the research, under the five key themes (developed through the data analysis and literature review). They include communication changes and participatory planning, social capital and the role of place, glocalisation through *place* and networked interactions, the value of *hybrid places*, and networked communities of practice. Within each of these themes, theoretical insight and implications for practice will be considered. These five elements link as major facilitators of enlivened communities and support a strong sense of *place*.

8.1 COMMUNICATION CHANGES AND PARTICIPATORY PLANNING

From each of the four research perspectives (phases), the changing nature of communication has become apparent. ICT is playing a significant role in the way we communicate and negotiate our social interactions. This is consistent with the findings of Dourish and Bell (2011), and Wellman (2001b), as well as others in the field of Human-Computer Interactions. The first phase was reflective in its consideration of the implications of these changes for planning practice. The second and third phases of the research demonstrated these changes in more practical ways within the context of libraries. The fourth, discussed the practical application of these changes, and how they are influencing the conversation about *place*, for both planning and placemaking. Communication changes are also affecting a shift in the expectations of interactions between friends, acquaintances and the official organisational structures (governments, including libraries and planners). Referred to as 'Web 2.0' expectations (Kaplan & Haenlein, 2010), they required responsive and interactive communication exchanges as well as providing up-to-date information. Some of the key changes (to be discussed here as themes) are: the globalisation of knowledge, co-presence and distant others, and combined or *hybrid places* (both physical and digital), as well as the development of networked communities of practice.

Communicative planning theory highlights the relevance and need to develop channels of communication, between the decision makers, planners, and community for good planning practice (Healey, 1996). The processes of effective democracy require broad community engagement and participation (Rydin, 1999). Communicative

planning theory emphasises the need for this discussion around land use and development issues (Healey, 1996). The importance of communication as a process between community members and governance authorities has been discussed in each of the four phases of this research. There needs to be an ongoing dialogue between governments and community, which can be supported, even contextualised through a connection to meaningful places. Public libraries present an attractive *place* for these conversations (Goulding, 2009). Communicative planning also refers to an ongoing dialogue, and creation of a community of practice for urban planning (Wenger et al., 2002), specifically to improve local placemaking. Within the fourth phase of this thesis utilised the UR[BNE] Design Collective to highlight some key examples of networked interactions, reaffirming the value of broad community participation within the conversation of planning practice, and an ongoing role for the planning profession within the discussions and actions that make great *places*. The combination of action and discussion is powerful, and the use of ICT was a vital element for support and connection of the placemaking discussion. This conversation both face-to-face and digitally, involves and is enhanced through the professional planning and design voice. It is also inclusive of community enabling the further development levels of participation. These levels range from involvement in the organisational aspects of the placemaking events to discussion about the strengths and weaknesses, desires and aspirations, through to a simple interaction with *people* and *place* through specific events. The length and commitment to the communication process can vary.

Communication in planning practice, (revealed in the first phase Chapter 4), still tends to focus on an issue or needs basis, a traditional planning approach (Brody et al., 2003). A more powerful communication approach (illustrated in following phases of this research) can be achieved through ongoing interactions that are developed through networks. This type of interaction develops a strong social capital (Coleman, 1988), assisting communities in a variety of way. It is useful for planning where it focuses issues that are based on the celebration and creation of place (illustrated by UR[BNE] Festival – phase four). The levels of engagement have not been measured in this research. This leaves further questions relating how to quantify – the participation, general levels of satisfaction, and encouragement towards involvement, as well as the continued affiliation with approaches such as an urban acupuncture approach, for detailed investigation. The measurement of engagement could draw on the specific

relationships with *people, place and technology* (Seeburger, Foth & Tjondronegoro, 2012b).

In the first paper, urban planners reflected on their own interactions with communities. It considered the types of issues communities raised, and the various challenges potentially involved with communication through the networked interactions of social media (digital technologies). These mediums certainly present opportunities for planning discussion. The challenge is finding effective ways to utilise them to draw out meaningful interaction that reflect the real concerns and aspirations for land use governance.

This paper acknowledged the complexity of urban planning, balancing the multiple interests of stakeholders. The continued need for urban planners is clear, that is, to facilitate, channel and engage community involvement in planning matters. It was acknowledged, however, that the practice of communication could still improve. Some demographic sectors have minimal input into planning discussion, whether through lack of interest, disconnection to issues, lack of involvement, or failure of the message to reach them, the result is that some attempts to reach community receive a poor response. At other times, planning communications are process driven and ineffective at reaching the community, or a means of placating community with a token interaction. Community aspirations can change over time. Therefore, conversations with community need to be dynamic, ongoing and interactive (two-way). These conversations and connections with community are valued in a democratic system of governance that seeks to empower citizens with the direction of their communities. IT is the premise on which communicative planning is founded (Healey 1996; 2003)

The second phase, while presenting a public library context, draws attention to certain relationships of networked interactions. The ability of trusted *places* and attachment to these *places*, to add value and incubate the social interactions that occur within them became evident. The richness of personal relationships built on interest within the physical place is clear. Participants revealed that face-to-face interactions present a quality of social interactions that meets specific social needs. Connecting with community does not always require conversation, for some physical presence is enough. Developing community interactions can be supported by the mediation or guidance of an official party (i.e. the library) in order to support a sense of trust and safety. This can be built within a community *place*. There is an opportunity for planners to connect with

community within these existing safe places, when discussing planning issues. They can be used to generate discussion within the existing social networks, and to use the support of these networks to define and clarify the aspirations of the broad community.

In the third paper, the research considers the management and governing position of libraries further delving into the potential strength of these places. The strategic positioning of the library as a centre for innovation, incubations, as well as its traditional role for knowledge access and development is explored. This strategy utilises the resources of the public library to assist in the position of broader communities within the digital age. The potential is to harness the global network, essentially to localise it towards the needs and strengths of individually unique communities. Supported by the thoughts of Zukin (2009) who refers to a concept of 'authenticity' in places, wherein communities create their own culture and identity, rejecting a homogenised mass-produced environment of major retailers and franchises. Planners' involvement in place-creation through strategic placement and management of use and form should acknowledge this development and positioning of community places such as libraries. It relates to the understanding of the structure of cities, their potential, and the interactions between *people* and *place* that shift over time.

The removal of distinct boundaries on *place* through the use of ICT is another significant change with the increasing dominance of new medias as tools for connection, development of uniqueness of *place* and connections that can now be built with ease between economies, communities and culture through the use of various ICTs. The translation of these connections, are valuable for planners in understanding how places work and layers of communication that can be built in and through *place* with the use of *technology*.

Compare then the fourth phase, which presents a potential solution, a way to connect the public with planners and the governance structures using events, communication, and *place*, to ignite conversation and debate. The festival or event is used to capture the attention and interest of the broad community. In this case the use of ICT supports, as well as documents the conversation and local knowledge, around specific places, including the aspirations for *place* (referred to by planners as valuable and essential in phase one). It is this *place* for conversation, and provision of a voice to citizens that affects some of the barriers that may have previously prevented involvement in the planning processes. Barriers such as the distrust of political

processes (Dalhgren 2009; Gibson et.al 2008), lack of response and interaction (Schroeter & Houghton, 2011) and the behaviours of certain hard to reach groups such as the *time poor*, *'backyard buddies'* and *disinterested* (Schroeter & Foth, 2009 ; Schroeter & Houghton, 2011). ICT developments are providing innovative, quick, more interactive and more accountable means of engaging with citizens.

Comparing between phases one and four, there is evidence of a changing approach to planning and placemaking. It is both event (that is action oriented) and participatory. All planners in both phases, valued the process of effective public involvement and participation. Phase one, presented a general response to regulatory frameworks, as they currently operate, to support planning decision-making. In contrast, the fourth phase was more focused on developing a culture of participation, and an active engagement in creating good *places*. The two are not mutually exclusive. They can work in tandem, to direct and inform each other. Ideas about good *places* can feed between the action approach of urban acupuncture (phase four) and the development of policy that guides the day-to-day activities of urban planners. Both support a communicative planning approach.

Responses to the use of ICT as a communication tool varied amongst planners. Some of the younger planners were keen to incorporate social media in their everyday activities, and already used it as one of their main modes of communication. Some of the older planners (or rather those non-users of ICT) saw some potential, but were less likely to be aware of capabilities or value, and understandably less likely to envision it in future use. The contrast of views about ICT was present in all four phases of the research, although library managers were generally the most proactive about seeking ways to utilise and implement ICT into their professional activities and their interactions with the public. However, the librarians noted that not all library management or library users were as advanced with their thinking. They made allowance for the library user with no intention of using technology. This non-user classification was user is a relevant persona for the planner to understand as well. Communication changes have not involved everyone and there are resisters (Satchell & Dourish, 2009), who by reason of personal choice may never use ICT. These non-users were identified and discussed within phase two of the research. Consideration for the non-user, whose choice is not to take-up ICT, needs to be factored into strategic consideration of communication methods. While non-users were predominantly of an older generation non-us, there

were also younger people interviewed (phase two) who had little time or interest in ICT, and specifically social media. The key message here, is that while ICT should be incorporated into a plan for community consultation, to use it exclusively would potentially widen the digital divide (Bauerlein, 2011; Notley & Foth, 2008) and ostracise the non-user. It needs to be coupled with other communication strategies or alternatively made visible through public screens (or other shared mediums, another potential research question about effective mediums of presentation becomes evident here).

As noted, by Burby (2003), Brody et. al (2003), and Fiskaa (2005) public participation has the positive benefit of improving acceptance of projects. Coupling this benefit with an event or physical activity within the context supports the development of ownership, and connection solidifying the value of place to the community. Consider this process in light of Soja's (1999) trialectic of 'spatiality–historicality–sociality' of place. The festival style event creates place with deep meaning and value to community creating in effect this trialectic though experience. The implication for planning is to build events into the communication process specifically bringing people into a place to enjoy, conceptualise and connect. Traditional planning consultations take a limited view of how communication occurs, generally utilitising text based mediums or interview style approaches. This relationship approach creates an experience of *place* adding additional meaning to the civic exchange. It also removes the focus on the 'power relationships' of formal forum and focuses on the experience. This event process can be supported and events built through the affordances of ICT. ICT can enhance and capture conversation, questions and information. ICT can also aid the visualization of change it can be used to create hybrid reality versions of future development and like Gordon and Manosevitch (2010) or Foth et.al (2009) create simulated versions of change. Planners need to interact with the process of ICT design and application development to ensure they can tailored to their specific needs and capabilities required. Planners can collaboratively work with ICT developers to build the platforms of communication. Platforms that allow for information and knowledge sharing to enhance the networked interactions that underpin their decision-making processes.

8.2 SOCIAL CAPITAL AND THE ROLE OF PLACE

The connection between place and social capital is strongly argued by Jacobs (1961), Oldenburg (1989), Gehl (2006) and others. It has been further demonstrated throughout this thesis. While social capital may exist beyond the concept of place, it has strong connections with place, as it provides a physical locality for patterns of life to generate the valuable interactions to create social networks and the structures that support it (Coleman, 1988). These structures lead to actions, the resource used to measure social capital (Coleman, 1988). The second phase of the research particularly drew attention to the presence of social capital developed in the context of the public library. Other research like Aabø and Audunson (2012) or Johnson (2010) argue strongly for the role of libraries in the development and encouragement of social capital. Canada Bay and its distinct social groups like the knitting group provided evidence of social capital developing and turning to actions that supported community and individuals. Business conducted in the library was also evidence to the development and presence of social capital. Similarly the activities presented in phase four of the research involved activating place, which is part of the process of building social capital amongst the participants.

Social capital is further revealed through each phase of the research. It is a required commodity for the development of networked interactions, which underpin community. Library managers referred to the development of trust that underpins social capital and demonstrated that it is something libraries and other forms of local governance can and should support or encourage. Much of the library sector literature presented in phases two and three, supported this role for the library espousing the value of libraries for the development of social capital (Aabø & Audunson, 2012; Ferguson, 2012).

8.2.1 *Interaction through ICT and social capital*

Networked capital is social capital developed through digital media networks (Acevedo, 2007). Throughout this thesis the integration of social capital developed through place and network capital is considered. The relationship between the two is inherent in understanding social capital in the framework of urban informatics (that is the

interconnection of people, place and technology) (Foth et al., 2011). The positive effect of seeing elements of people, place and technology combine to create opportunity to strengthen communities through knowledge sharing and glocalisation has implications for planning theory and practice, library positioning and local governance.

Implications for planning theory and practice

Social capital and the connections to place are well recognised in planning literature (Healey, 1998; Rydin, 1999; Rydin & Pennington, 2000), what is more recent is the role of ICT in the development of that social capital and its continued connection to place. Understanding the interaction between people, place and technology for the modern urban environment, will become increasingly significant, and the continued growth in the number of users of mobile communications across the community will alter expectations and modes of communication (Foth et al., 2011). The implication for planners is a need to understand the process of social capital development within this ever-changing environment and social setting, to create positive linkages between the digital and physical realms, with social capital developed and interacting between the two. The interaction between network capital and the social capital of place to benefit lifestyle, participation and civic engagement is an area where further research should be undertaken, including the relevance of a digital divide and ways to minimize its effect. Considering this issue in light of the findings in this research draws attention to the role of libraries in connecting community to the local planning issues of their area. The connections between libraries and planning have been minimal, an under utilised resource for libraries and planning as they have much to support each other with in terms of information and community. Investigating further ways to connect and share resources as well as the inhibitors of this relationship could be the subject of further research.

Implications for public libraries

For public libraries a strong argument for their continued relevance is the service of providing a series of *third places*, specifically for the social capital that they generate. The public library is a trusted, meaningful and quality place, a brand that can be built upon and valued (Hillenbrand, 2005). Strategically libraries need to use this social

capital brand to extend their market penetration across communities. Local governments in Australia generally have responsibility for both libraries and planning. The development of trust and conversation between local government and communities can be used across departments and social trust within the library can provide an additional means of engagement and interaction for other consultations on planning and general council matters. Libraries can position themselves as a central community consultation point for local government affecting an efficient link with communities and government. Similarly this process could also be applied at other levels of government.

There is also potential for libraries to utilise the networked interactions of ICT to support their services, extend their connection and reach, as well as reimagining the way they provide social connection and interaction. The market for information has changed and the personalisation of information has potential for libraries as connection nodes, incubators of ideas and glocalisers of networked knowledge. This potential is all supported through physical places that build social interaction, trust and social capital.

Implications for local governance

Local governance can utilise the strength of combining local place and networked interactions to position local economies within a global context, ensuring that the support and encouragement of such places is prioritised within regional economic strategies. The position and location of local libraries and other third places of a similar nature are highly visible and acknowledged within urban centres to ensure access and usage of the digital networks available. On a regional planning level this relates to the development of strategic plans and strategies that guide the development of regions. Thinking in holistic ways about cities including economic, landuse, social and cultural details can illuminate synergies otherwise missed. The examples of library governance illustrated ways that technology can support these relationships.

8.3 GLOCALISATION THROUGH PLACE AND NETWORKED INTERACTIONS

The process of glocalisation (Robertson, 1995) is discussed specifically within the third phase of the research. By tapping into the resources of a globalised network the strengths of local community are heightened. Re-appropriating global ideas, using

connection to global markets can shift the dynamics of a local economy. There is a role for physical place and face-to-face interactions in the development of a distinct glocalisation over globalisation. The process of glocalisation specifically in relation to information, markets, and economies, can build unique places that enhance culture, support authenticity (Zukin, 2009) and improve the livability of urban spaces.

The role of public libraries to connect and present communities across the Internet to the global economy, has been under-explored but presents opportunities and possibilities for local and regional development (Chowdhury et al., 2006). Phase three of the research considered the positioning of the local public library and its ability to assess and share community aspirations and directions. Development of a hybrid local place in the library that is both physical and digital can support local communities in their positioning in the global economy and maximise the benefits of digital infrastructure like the National Broadband Network (NBN). With or without the NBN information is changing and digital technology is evolving. Considering the long history of libraries in bringing together people and information, in creating knowledge and experience the modern library needs to acknowledge that changes in the way this information is created, stored and shared. Next-generation libraries will be essential for supporting and connecting the strong, networked community, and a key facilitator of glocalisation for sustainable vibrant communities (Chowdhury et al., 2006).

Developing this glocalisation role within public libraries has potential benefits for the business sector too. To date, there has been little interaction between the local public library and the business sector. This is likely to remain so for the large corporations, who are generally independent in their information needs. However, smaller start-up businesses and small office/home office (also known as SOHOs) can gain a lot of support in local public libraries, through local networks, global links to markets and information. This sector should not be forgotten in the strategic plans of libraries or local government. Offering the technological links and innovations that can support business and incubate ideas may have local and regional benefits for communities. In phase 3 library managers mentioned the benefits of linkages and incubator. Co-locations of libraries with startup offices, health precincts and other relevant partners can strategically generate synergies good for the library and the co-locator.

Communities do not necessarily define their cities as departmentalized entities. They seek involvement without complications. Planning like all local government operations needs to be considered in a holistic way as part of the overall interactions of

a city. Each division or department gains insight by understanding and developing relationships that are cross-disciplinary. Planning can gain from the insights of how the physical and hybrid places add meaning and value to a city, in terms of social, cultural and economic interactions.

8.4 THE VALUE OF HYBRID PLACES

The mobility of modern ICT has an impact on the relationship and development of the concept of place. Networked connections create an invisible layer of information across our urban environments. Interactions can occur face-to-face or via digital connection within place. As these new technologies are finding wider community acceptance and usage, the phenomena of hybrid places both digitally and physically becomes more apparent (Dourish & Bell, 2011).

In 2001, Wellman discussed the physical place and cyber-place examining the questions of how interactions in the two realms were changing communication, time and place. Through the 2000s there was indeed the growth of a network revolution. While this study of public libraries revealed that there is still a significant portion of the population not participating in this revolution, since then there are also changes in the usage and freedom of mobile devices that draw together these two realms of physical and cyber (referenced here as digital). Wellman (2001b) highlighted that the networks and interactions were necessary for the digital realm and similarly they are necessary within the networks of the physical world. The most common contacts in digital networks are people in close proximity and these networks are constantly communicating in both the physical and digital world.

The hybridity of physical and digital is also seen in the increasing storage of information about places and for places in the digital space. Using the facilities of the Internet like geo-location and cloud computing, various levels of communication and information can be linked to specific localities. Like an essence or vapour invisible to the naked eye, it is left connected to a place, remaining to be discovered, used and shared with a broader community not bound by time or space. Hidden from some and revealed to others. This adds a new dimension of knowing to place in this hybrid physical and digital environment.

Analysing the findings from the four phases of this research in the context of Lefebvre (1991) triad of the social production of space, assists us in understanding the development of this hybrid of digital, physical place. The three elements of Lefebvre triad were: conceived, perceived and lived spaces. It is through these three ways of understanding space that we can appreciate the development of place. When we hybridise our social connections and have a duality of digital and physical interactions, each of these elements can be influenced. The following Table 8.1 is used to illustrate and present this hybrid interaction.

The following Table 8.1 illustrates the triad and relates it to the emergent 'hybridity' of place. Place is understood both physically and digitally in each of the three aspects of the triad. Table 8.1 particularly relates to urban planning and the development of place where we manage and control the use of that space. Note however that through the development of a hybrid place the role of the citizen can shift from formal inputs through the planning process, to a more dynamic ongoing conversation, to be recorded and shared. Interactions across networks can establish an understanding of place, broaden discussion and capture some of the elements of perceived place previously hidden, private, and unmeasured.

> *'If space is a product, our knowledge of it must be expected to reproduce and expound the process of production.' (Lefebvre, 1991)*

This quote viewed in a digital context, would imply that there is a direct, and possibly exponential bearing on our understanding and development of place, in a hybrid and digital age where the social information is so easily shared and distributed.

Lefebvre Triad	Physical Place	Digital Interaction for Development of Hybrid Place
Conceived - Representations of space "Conceptualized space, the space of scientists, planners, urbanists, technocratic subdividers and social engineers, as of a certain type of artist with a scientific bent -- all of whom identify what is lived and what is perceived with what is conceived." (38)	Designs, discussion, values and theories are realized through construction of place.	Analysis, reading, understanding the use of place and connection to place. Scientific gathering of data – sensors in place
Perceived – Spatial Practice "The spatial practice of a society secretes that society's space; it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely as it masters and appropriates it." (38)	How place is understood, appropriated and used.	Via digital technology to create a well-formed presentation of place for both physically present and absent. Dynamic and shared, evolving and subject to popularity and pressure.
Lived Spaces – Representational spaces "Space as directly lived through its associated images and symbols." (39) Think of this as social place.	Demonstrated with discussion of third place face-to-face interactions, everyday life in place, livability	Photos, text messages, calls labeling, rating investigating

Table 8.1 Lefebvre Triad and Hybrid Place

In the first phase of the research, a typology for ICT usage in urban planning was developed. If each of these three categories of the typology is compared to Lefebvre's triad, we can see a direct comparison. The comparison is shown in the following Table 8.2. Conceived space or representations of space is supported by ICT with the use of technology for the analysis of place. This can take the form of sensors, crowd sourced information, and other ICT tools that help planners, designers, architects, and scientist. This analysis helps us understand place and the design or conceive the future of that

space. Perceived space that is spatial practice, can be supported with the development of ICT within a space. ICT allows for public or community perceptions to be shared, about the social relationships space and its use. The development of crowd sourced and web 2.0 (interactive digital technologies) means that whole communities can share their perceptions, build and alter their understanding of place. Lived spaces, that is representational spaces, relates to the ways the space is appropriated, the experience of space and the connection here for community to interact and convey the message of that lived experience to planning practice.

Lefebvre Triad	Typologies of ICT for Urban Planning
Conceived Space	1. Technology for analysis of place – *tools for understanding place* *Providing and gathering up-to-date, information for planners in make informed decisions*
Perceived Space	2. Technology in Place – *enhancing spaces with ICT* *Providing information about spaces – crowd sourced & professionally developed*
Lived Spaces	3. Technology for community engagement about place *Engaging community in the planning processes sharing public knowledge about places*

Table 8.2 Comparison of Lefebvre triad and typologies of ICT for urban planning

Digital technologies can be utilised to understand how space is conceived and thus aid the planner in the analysis of place. They provide the tools that can collect real-time data and answer questions about the use of spaces and how to design or alter these spaces in the future. This tool is about future shaping of places. The information available can be gathered through a variety of means and new methods of sensoring interactions and use are continually being developed. Techniques used for analysis and evaluation of this data by planners and researchers of place needs to match the development of these technologies to take the best advantage of them.

Perceived space reflects on the ways in which we interpret places. It is a qualitative view of how a place is. The typology of technology in place can help planners to understand current values and interactions that are occurring in place. They can allow a public feedback look to the planners and governors or decision-makers

concerning how a place in perceived by the community or public. The formal management of digital technologies allows these same decision makers a space to influence the understanding of place and in turn interact with a community as they develop uses for place.

Lived spaces can be matched to the concept of technology for community engagement and ownership of place. The use of digital technologies has been seen to create a hybrid place of interaction. This hybrid place can be used by decision makers (and planners) to create a conversation about place and for the engagement in place (Schroeter & Houghton 2011).

These relationships and comparisons are broad in their application, and in various contexts there will be an overlap and potential interaction between the three elements of the triad, as well as between each individual typology. Through the combined understanding of the Lefebvre triad, the social experience that creates place can inform and enhance planning practice. Using ICT to gleen an understanding of these elements provides additional tools for urban planning.

8.5 NETWORKED COMMUNITIES OF PRACTICE

Networked communities of practice (Wenger et al., 2002) support the development of knowledge and best practice within a given field or discipline, or general community in which they establish. In the third phase of this research, they were identified in the context of libraries. Comparing across all four phases, they also support urban planning in the context of urban acupuncture and traditional planning practice.

Communities of practice can flourish when they are being nurtured and contextualised in the local, and where communication channels are efficient. The public library as a *third place*, a social place, commonly supports the gathering of interest groups. Through these networked communities, innovation and creativity can be incubated, whether it is technology meet-ups in the library, or urban planners riding bicycles through the city (consequently considering the practical aspects of movement and design approaches for transport). The networked community begins to affect the cultural understanding of *place*, both the meeting place, and in the case of planning, those places that are conceived (Lefebvre, 1991).

Networked communities in the modern society rely heavily on the use of ICT to enable a conversation. The use of social media has several advantages for these discussions. Firstly, social media allows for multiple voices within the conversation, many members can be involved simultaneously and over extended periods of time. Secondly, social media provides legitimacy for the 'lurker,' that is, the non-participant to reflect, learn and hear the discussion, even if they chose not to engage or interact. Thirdly, as a Web 2.0 – interactive style of communication, ideas can be influenced, refined and changed through the process of discussion and use. Theoretically, all members of the network can participate in this process. Fourthly, the conversation lingers. A semi-permanent record of the conversation allows time to mull over or digest over-time, and even participate without physical presence. The fifth aspect is the affordance of social media to connect or link to physical place – geo-locating data. This process can extend or deepen the meaning of *place* for networked communities of practice. For example, *Dîner en Blanc* (described in phase four) provides an example of an event that fosters vivid memories and meaning for participants, forever affecting their understanding of the potential and relevance of the secret location where the dinner was set. Further, this meaning is captured in digital form preserving traces for those who were not present at the event (including video footage). The discussion about what the event and use of space could mean for planning practice and placemaking is further facilitated through the use of social media. The interaction of place, activities (of people in place) and the conversation (communication through social media) influences the expectations of place, design and the provision of facilities within public urban spaces.

Hybrid places (both digital and physical), can support and develop these networked communities of practice. They can be used to create a stronger sense of community and social capital locally and for the development of professional practice. Consciously building in networked communities of practice to either library spaces or other public spaces within the urban environment can support better planning and design outcomes, glocalised communities with economic and cultural benefits, as well as supporting placemaking for vibrant cities.

8.6 INTERDISCIPLINARY INSIGHTS

A key affordance of this multifaceted research project, is the interdisciplinary insights that can be offered. Urban planning, libraries, local governance and ICT design, do not

traditionally interact, but these disciplines are affected by similar patterns of behavioural, social, economic, and technological needs of communities, so their distinct understandings can enliven an interdisciplinary discussion with new perspectives, insights, and opportunities for all.

> The sharing of ideas can be achieved through open groups like design collectives (such as the UR[BNE] Design Collective referred to in phase four) or facilitated at the local governance level to achieve the best outcomes for a sense and meaning of place in local communities.

Sharing knowledge on these topics will broaden general understandings and perspectives, supporting an integrated approach to the pressures and challenges of urban development for the increasing populations of modern cities.

The principle of Web 2.0 communications could have a major influence on the expectations of a network-connected generation. They present an opportunity to be interactive and responsive in a governance perspective (Kaplan & Haenlein, 2010), which will flow on to urban planning and other areas of civic participation. The understanding of these changes needs to be shared across disciplinary boundaries to build an integrated approach to how we connect and interact across network technologies. These understandings relate to the potential to use glocalisation in a positive way for economic, cultural and social development.

One significant area that provides for shared insight is the evaluation and assessment of user experience. Human computer interaction studies place a particular emphasis on the user experience, while the urban planning field considers the design elements of urban places. To combine these two areas provides an opportunity to bring something extra to both fields by utilising and extending the framework for evaluation outlined by Seeburger, Foth and Tjondronegoro (2012a). Their framework was constructed for the evaluation of user experience in an urban informatics framework. Seeburger et al. (2012a) suggest a set of key elements of evaluation for each category place, technology and people, which can be utilised for the development of data collection to support the design of ICT to enhance place interactions.

The elements they list for consideration of place are:

- Meaningfulness of activities - Are the activities in the place in the nature of business, pleasure, idling, or other settings?

- Organisational/ social setting - what kinds of activities are accomplished in the organisational and/or social setting?
- Fashion – what is in fashion according to the place
- Habits – what are the habits of the place
- Norms – what are the norms of the place
- Time of mobile mediated interaction
- Place of mobile mediated interaction
- Accompanying persons (Seeburger et al., 2012a, p. 125)

The following additions to this list reflect the planning perspective:

- The effectiveness of design elements of place
- The connectivity of place and accessibility
- Physical comfort and functionality of the place.
- Safety

Place audits are not uncommon in urban design and planning practice. They provide a framework for accessing urban design elements and functionality of place. This professional understanding evaluation and analysis can support the urban informatics framework and the other disciplines like ICT that are involved. Place audits that include technological elements and their interaction with the physical will broaden the planners' understanding about the ways people are interacting and interpreting their public places. A revised place evaluation list for urban planners is presented in the following Table 8.3.

PLACE AUDIT	
Elements	**Questions for consideration**
Type of place	There is a vast array of public places with different functions and meanings, so establishing the type and purpose of place will assist development of effective urban informatics interactions
Activities of place and meaningfulness	Are the activities in the place in the nature of business, pleasure, idling, or other settings?
Organisational/ social setting	What kinds of activities are accomplished in the organisational and/or social setting?
Fashion	What is in fashion according to the place? What changes within the place or is a trend situated in that time and place?
Habits	What are the habits or daily rituals of the place? What are the patterns of activity
Norms and functionality of place	What are the norms of the place? Is there a baseline or constant within the place or is it subject to change and how? Does ICT offer a role in supporting or creating the norm or the change? Does it affect the functionality of place?
Time	When does the mobile or other ICT mediated interaction occur?
Siting and location	Place of mobile mediated interaction – does it interfere with other activities, accessibility or visual quality of the place? Are the necessary elements of infrastructure in place: • Physically – WiFi, power, etc • Digitally – web-based location, relevant connections and links
Accessibility of site	How do the points of physical access to the site and the flow of movement work with the integration of ICT? Does ICT enhance or enable improved access, legibility and way finding?
Accompanying persons	Who will use the *urban informatic* information, what demographics are involved? How does the intervention assist or work for them?
Safety	Does it improve safety of people and things within the place? Does it present a risk to people and things within the place?

Adapted from (Seeburger et al., 2012a)

Table 8.3 Urban Informatics Place Evaluation Audit

In the light of the concept of urban acupuncture, the physical changes brought about by the urban informatics interventions should be assessed and considered. Measuring the levels of involvement that the physical changes and the ongoing dialogue that this approach generates.

Following the place analysis, the elements listed for technology (Seeburger et al., 2012a), include:

- ‘Purpose – what is the purpose and why would someone use it?
- Functionality -
- Complexity - Is the software complex enough to fulfill its task without hindering usability?
- Usability – is the software easy to use?
- Aesthetics -Is the designed technology visually pleasing? Does the design support usability?
- Acceptance - Does the application suit the place and support current social practices? ’ (p.125)

Where urban planning may consider deploying new technologies, these technically specific issues need to be evaluated. In designing applications for planning purposes discussions with ICT designers and programs will need to include and respond to these technology specific elements. Adapted again for a planning context the following Table 8.4 presents a technology evaluation audit.

TECHNOLOGY AUDIT	
Elements	**Questions for consideration**
Purpose	What is the purpose and why would someone use it? How does it assist a planning function? Is it designed for public or planners?
Functionality	Is the functionality sufficient to fit its purpose?
Complexity	Is the software complex enough to fulfill its task without hindering usability?
Usability	Is the software easy to use?
Aesthetics	Is the designed technology visually pleasing? Does the design support usability?
Acceptance	Does the application suit the place and support current social practices?

Adapted from (Seeburger et al., 2012a)

Table 8.4 Urban Informatics Technology Evaluation Audit

For the third consideration of people, Seeburger et al. (2012a) list the following elements of consideration:

‘Requirements - What are the technological requirements people must master to use the technology?

- Motivation - What motivates people to use the technology? What need does it fulfill?
- Prior experience - How do prior experiences influence technology
- usage?
- Feelings - How do people feel about using the technology?
- Affect - How does the technology affect the user?
- Emotions - What kinds of emotions are created through using the technology?
- Enjoyment - Do people enjoy using the technology?
- Likeability - Do people like the technology?
- Social Interaction - How does the technology support sociability? What kind of social interaction takes place? ’ (p.125)

Seeburger et al.s’ (2012a) work again focused on the users’ response to technology, which from a planning perspective would include the relationship to the physical place and additional questions could be added for this purpose. For instance, how do the emotions created through technology relate to the enhancement of place? Or, enjoyment – how does this technology relate to the enjoyment people have within this place? Affect – how does the technology affect the user in relation to the physical place? The third evaluation audit for the people element of the urban informatics triad is presented in Table 8.5.

PEOPLE AUDIT	
Elements	**Questions for consideration**
Requirements	What are the technological requirements people must master to use the technology? What requirements must be met for planning purposes?
Motivation	What motivates people to use the technology? What need does it fulfill? Can it reward or encourage?
Prior experience	How do prior experiences influence technology usage?
Feelings	How do people feel about using the technology?
Affect	How does the technology affect the user? How does the technology affect the place? Does it serve and information, social or combined purpose?
Sociability	How does this intervention improve sociability and relate to the experience of this place? Does it allow for ongoing or short-term interactions?

Adapted from (Seeburger et al., 2012a)

Table 8.5 Urban Informatics People Evaluation Audit

These elements of evaluations while originally (Seeburger et al., 2012a) constructed to support the development of ICT design, resonate with the assessment of the effectiveness of a combined planning and technology approach. Urban planners can use this framework to assess user experience within the light of urban informatics and planning practice as it provides a means of assessing the effectiveness of ICT strategies and technology. The three audits focus or direct the assessment the elements of consideration when design ICT, and are aimed at supporting urban planners in their conversations with ICT developers. Additionally it could be used within a library context when planning for the development of an ICT intervention that connects the urban informatics triad to produce a hybrid place of connection.

Finally, there are further design approaches used within the human computer interaction disciplines, which could inspire and inform urban planning and design. While these are outside of the scope of this research, they present an interest area for further analysis. The rigid disciplinary silos of tradition will only serve to constrain future innovation in this area of urban informatics. Interdisciplinary conversations have something to offer all, including the potential to initiate and sustain innovation, to improve the lifestyle and livability, of the constantly expanding urban environment.

Chapter 9: Conclusions

This section draws together the findings of each of the papers presented within the thesis. It focuses attention on research questions presented from the outset and further considers the overall conclusions to the thesis. The questions are restated here as:

1. *What is the role of digital technology in supporting urban planning for the purpose of design and creation of public places*? Digital technology refers to information and communication technologies (ICT) including the Internet and mobile information and communication technologies (mICT).
2. *How does, or could, the use of digital technology in our public urban spaces support a sense of community, belonging and the creation of meaningful places?*
3. *How can the use of digitally networked interactions (ICT and mICT) be appropriated to support or enhance the way urban planners collaborate and work with community to create public urban places?*

Through the findings of this research, a series of roles for digital technology have been established for urban planning. Within the first phase of the research, three typologies were identified – technology for analysis of place, technology for enhancing place, technology for community engagement. These roles were also evident within the case study of a public place – the public library.

The development of meaningful places can be aided by ICT through the hybridisation of place. The addition of meaningful links between the physical and the digital has many potential benefits for place. Local libraries are using ICT to develop global links and strengthen local economies. In the UR[BNE] case study of chapter seven, urban planners are seen to be inspiring each other and the public, about the use and activity of the city, through the use of ICT. Meaningful traces of involvement in place can add interest and wonder for future users. ICT can provide additional connections to place and connect with members of local communities in a way that is familiar to how they are already communicating. The understanding of the hybridity of

place is presented within the context of the place theory of Lefebvre. The relationships to the ways people interpret place is continued in both the digital and physical realms.

Communicative urban acupuncture is presented in the fourth phase of this research as a means of activating spaces and building hybrid networks (digital and face-to-face) that encourage and support community collaboration for placemaking. Utilising the three typologies of ICT technology for urban planning, these conversations initiated in active events such as urban design festivals can produce a meaningful and ongoing dialogue. The approach involves the ongoing dialogue of planners with community and is built in the context of evens. It involves planning taking an ownership of places beyond their approval and the development of a hybrid relationship within place.

The development of additional tailored ICT applications for planners is encouraged by this research. The development of the urban informatics audits presented in the discussion of chapter eight provides a guide for planners to consider the elements or qualities of such technology.

9.1 SUMMARY OF FINDINGS AND CONCLUSIONS

The first paper presented in the thesis is titled, ***Integrating ICT into the planning process: Impacts, opportunities and challenges***. Its role was to contextualise currently practicing planners' thoughts on ICT and social media, as it related to their professional roles – directly corresponding with the first stated aim of the research. In the conclusions, the paper also starts to address the third question, by specifically considering the new tools of technology that support the role of planners. Within this paper a number of typologies for the uses and application of ICT were developed. They include: firstly, technology for analysis of *place* – tools for understanding *place*; secondly, technology in *place* – enhancing spaces with ICT; third, technology for community engagement about *place*.

The use of ICT for urban planning purposes remains underutilised in practice, in part through planners' lack of exposure to their potential, and in part the lack of development of systems that meet planning needs. Facilitating conversations that bring ICT designers and planners together is required to meet the full potential of ICT for planning practice. The real value of ICT for planning will come with the development

of ways of gathering the available and potential data, so that it can be synthesised into functional and meaningful units for planning policy and practice.

Planners can contribute valuable insight to the discussion of urban informatics from their understandings of the systems of cities and relationships between people and *place*. Specifically, their insights into the interpretive basis for developing and utilising the wealth of real-time data from government sources, social media, and sensor networks, as part of the practice and promise of urban informatics, that is becoming readily available could assist data collection, management and use (Evans-Cowley, 2010b; Foth, 2013). The paper suggests future research should explore what expectations are raised within the community through the facilitation of communication with mICT.

As an emerging field of study, much remains experimental in that few occasions of computer simulations and community involvement have led to real results in place (Gordon & Manosevitch, 2010). There is further scope for research that documents case studies and testing prototype development of planning with urban informatics tools. (Evans-Cowley, 2010a, 2010b; Foth et al., 2009; Fredericks & Foth, 2013)

The second paper is titled, ***the continuing relevance of library as a third place for users and non-users of IT: The case of Canada Bay***. Its purpose was to consider the library in the context of Oldenburg's third place. It presented empirical data about the case study library Concord Library (in Canada Bay New South Wales) and its role within its community. Valued by its regular patrons, supporting its community with a physical presence, its tangibility provides an advantage over purely online environments. They serve the community, both those with high levels of technological literacy and those without. The challenge for libraries is to effectively merge and leverage the position of people, place and technology interactions to provide the community with relevant links to technology and information that creates or has meaning in people's lives (Bilandzic & Foth, 2013). They are safe and trusted environments for a wide range of community members.

As our society becomes embedded in the digital knowledge economy, supporting both users and non-users of technology becomes a critical role for libraries. By providing local places, local information and local community, they have the potential to be catalysts for local knowledge and technology growth within a digital society. The

medium for knowledge collection has evolved, but the role of libraries as repositories of community knowledge (Church, 2009) is still as relevant.

It is here that Giddens' (1986) theories of 'presentation of self' for public versus private life can inform analysis and reflection. In the library, there was evidence of mixed associations with space, some for socialising and some for privacy. The presentation of self both in real and virtual space may take a dramatic shift with the acceptable types of presentation adjusting over time. This leads to further questions about the changing nature of these presentations, how are they re-contextualised for a hybrid relationship between the physical and the digital layers of the city?

The third paper, ***The Future of Libraries: A qualitative study of library experts' visions***, considered libraries in the context of the city. As third places, what specifically does the library offer the community, responding to how people use and relate to them (or research question two)? The paper reports that there were opportunities for libraries to function as digital hubs of Internet connection within the community.

If libraries were to be recognised by local government policy makers, place makers and urban planners in an attempt to establish them as communication hubs, a broad range of opportunities would be enabled, including: Firstly, the brokerage of partnerships and links with other libraries, government agencies, and key players to create strong localised networks. Secondly, libraries have an opportunity or role in enhancing community lifestyles through activity, connection, and education. Thirdly, libraries can actively minimise the digital divide within communities and increase access and equity in terms of connectivity, provision of information and services. The fourth opportunity presented is the capacity of libraries to enhance connectivity and lifelong learning across communities, providing skills for workforce, leisure, sustainability and political engagement. Finally, their capacity to aid local communities to position themselves (individually and collectively) within a global networked knowledge economy is a real advantage for their local areas towards supporting entrepreneurial initiatives in the creative industries and thus creating and sustaining regional prosperity that does not rely on old industries. This element plays a part in the development of globalised activities, networks and awareness.

The opportunity to use the library as a third place to connect to the community and build networks is pertinent. As the library has the potential to become a valuable tool for assessing and sharing community aspirations and directions, by acting as a physical

manifestation of the community it serves. In design and physical development, this means less paper within the library and more digital technology; it means spaces for collaboration, for quiet personal work, and for the use of high quality digital tools. Within the community, the library requires high visibility, connection to community spaces, and accessibility.

Libraries bring people together in physical places to encourage the sharing of information, knowledge, and experience. The future of the modern library is the successful integration of these existing assets with the digital world and infrastructure such as the NBN that supports it. Next-generation libraries will be essential for supporting and connecting the strong, networked community.

Libraries also present a sample of the development of *hybrid places* that have both a physical and digital presence. Places that connect people both *insitu* and online with their community and with trusted knowledge networks. Planning for these *places* needs to include the two emerging and interlinked layers of the physical and the digital. Association with these *places* will develop on both levels and people may switch between both layers in their use of these *places*.

Tying the lessons of libraries to planning is to understand the development of the sense of *place* and the role of a facilitator and manager. The management and coordination of hybrid places can ensure both digitally literate and the non-users are included in the engagement with this place with citizens. Libraries can be used as a tool by planners in the existing link or considered as examples of patterns that work in drawing community together. The points of interest and levels of involvement are some of the key elements to effective engagement within these settings.

The fourth paper is titled, ***Urban Acupuncture: Hybrid Social and Technological Practices for Hyperlocal Placemaking***. It presents the empirical evidence in the form of a case study, of a new wave of communication, interaction, and interdisciplinary connection occurring in Brisbane. Considering UR[BNE] Design Collective and Festival of 2012, and its role as a stimulus for re-energising the city to take on the challenges of a growing population and all the problems that this presents. The UR[BNE] Design Collective provides a valuable space for Brisbane's planners and community to engage in discussion, debate, and professional growth. This paper presented a new use and understanding of the term urban acupuncture as a hyper-local

treatment for the re-creation and enlivenment of urban spaces. The examples in the case study involved a series of physical actions in inner city Brisbane, which were supported by an ongoing online and face-to-face community dialogue. It resulted in a successful urban acupuncture treatment being applied. This hybrid of physical and virtual conversations and actions that resulted has helped to enliven inner city of Brisbane and beyond. The Design Collective and Festival successfully worked at encouraging and supporting, the interest and energy of professionals and community to activate and enliven urban places across the city. UR[BNE] Design Collective illustrates the utility of social media to create ongoing dialogues that conceptualise the planning role beyond regulation and development, which we will refer to as *static physical planning*. *Static planning* is the tradition of planning focusing on the traditional management of landuse through legislation, codes and guides to control the nature of urban form. Instead, it included a more communicative, action oriented, process of planning and city creation, - which we refer to as *action planning and placemaking*. *Action planning and placemaking* involve the interaction of community and planners in the creation of the less tangible but equally relevant qualities of *place* and its use. Some of the features of placemaking are events, temporary installations, the visits of regulars, the social behaviours of people within places. Placemaking develops the life between buildings (Jacobs, 1993 #131), the life of streets (Jacobs, 1969), shared public places (Oldenburg 1989) and ultimately the vitality of the city. Action planning considers the holistic health of the city, and applications of *communicative urban acupuncture* can support the ongoing health and vitality of cities. The '*bricks and mortar'* of buildings are part but not the whole of the environment, and the influence and engagement of citizens is not confined to 'one off' letters of objection in relation to development. Rather citizens are engaged in the ongoing relationship with spaces and use, social interaction and the creation of *place*.

Urban acupuncture, a neo-planning approach that broadens communication outputs and inputs, is augmented through digital technology (specifically ICT). It involves planners, designers and citizens together in physical actions (temporary or permanent), to recontextualise how we understand and use public place. Potentially impacting on the creation of vibrant liveable cities. Urban acupuncture is about building hybrid places of the virtual and physical city.

9.2 RESEARCH IMPLICATIONS

There are several implications that can support policy development generated within this research. Firstly, urban planning should consider the use and potential for ICT within the various aspects of planning practice. The three typologies of its use generate directions for the development of specific ICT applications that would aid and enhance the knowledge base, consultation process and understanding of place. Additionally this research presents an audit process adapted from ICT uses (presented in chapter 8), which can be used to frame the development of technologies for the use of urban planning.

Secondly, it reiterates the importance of the physical place and the connecting role of these places for the development of community. The role of the physical place is not apparently diminished by the advent of ICT but rather ICT presents a tool to further increase the importance of the physical place as a place with meaning.

Thirdly, there is a value in using social media and other forms of ICT to develop networked interactions. These interactions can be used to create an ongoing dialogue between community and governance to support the democratic processes of land-use management. Where there has been an acknowledge decline in the involvement of citizens in the affairs of State and governance (Dalgren 2009), improving engagement of citizens becomes an issue for democratic governance.

Fourthly, place can support communities within a globalised context through active glocalisation processes, programmed and directed. Libraries offered a logical place to provide such a context. This presents a regional development perspective for planning and the acknowledgement of shifting global economies and their new opportunities. It also presents new ways working, connecting and communicating regionally and locally.

As a result the fifth point is presented, that the role of libraries within the strategic structure or plan of a city has shifted, when reviewing strategic plans their role and potential in an information age should be given due weight and consideration. Libraries should be positioned for the strategic advantage of their communities.

The sixth point, that this research has touched the surface of a digitally supported communicative urban acupuncture approach and its potential for planning. It provides a

tool or new approached to strategic planning through the development of a ongoing relationship between, designers, community and government. It considers new and active ways to communicate and utilises the opportunities (or affordances) presented by the development of ICTs. Further investigation of this approach, both on a theoretical and empirical basis, would be valuable to the planning community.

This research also opens up questions in relation to the development of a new understanding of place in light of mobile ICT. Mobile ICT offers users ready access to a layer of information as they roam the city, through this medium information pervades our urban spaces, changing our relationships with these places. Changing social behaviours and interactions in this area warrants further investigation for what this means both to planning theory and practice.

This research has also contributed to the library sector's discussion of its future role and the place of technology within libraries. The bridging role for non-tech patrons is significant for libraries and communities as a whole. As more information and processes of urban living move online, access to technology and literacy for those technologies cannot be an automatic assumption. Governments and policy makers need to ensure that these supporting bridges are in place and this is especially (although not exclusively) relevant for under privileged and lower income communities.

9.3 LIMITATIONS

A limitation of a multifaceted approach is that the depth of investigation for each facet is somewhat reduced in order to cover a wider variety of cross-disciplinary views. The approach for this research was to combine cross-disciplinary thoughts and the layering of these investigations took precedence over drawing similar meaning from different *third places*. As a result each phase leaves further scope for quantifying and probing, while still providing a contribution to their specific disciplinary area and informing the overall discussion of this thesis.

Further work could be undertaken into a comprehensive, international context to analyse planners' perceptions that could have been gained through further surveys and research. Comparisons of culture and context of planning could further enlighten the topic area.

The choice of libraries as a case study is a limitation. There are so many varieties of public spaces, one way to investigate them is to consider examples of every type. However, this research focused on one type of *place* (the library) so that the multi-dimensional aspects affecting that place could be considered – those of users, governance and planning. The qualitative approach allowed for a phenomenological consideration of the experience of these library spaces as they are lived. This layering acknowledges the complexity of the development of the meaning of *place* and the players within the process. The approach created a unique aspect for considering place and drew together cross-disciplinary thoughts in an innovative way. So while on one hand it is a limitation it also presents an opportunity.

The library itself differs from many public spaces, in that it is indoor and staffed. This potentially creates a difference, in the way people connect to this place – the library, in comparison to other public places; these differences should be further investigated. The difference between the library and other public places in light of specific changes in communication through the use of ICT and digital technologies would be particularly pertinent addition to this research.

Additionally, libraries could have been considered across their variety of purposes, range of size and cultural context. As they further their position and adapt to the changes of the ICT phenomena their adaption over time and their value to society as physical places to connect and promote a networked society will pose further questions for research.

In the fourth phase the UR[BNE] festival represents one such festival and group, exploring this type of activity through broader comparison could present a further depth of data for analysis. The focus of the research however was to address the research questions in a multifaceted way and the research design and method were based on this premise.

Another limitation for this research has been that the uptake of ICT for planning purposes has been slow, leaving relatively few examples to investigate. Although this makes finding quality research samples difficult, it also presents opportunity for the development of planning focused ICT programs and approaches. These could be trialled and tested in a practice and research context to further the understanding of the relationships between their use and planning outcomes.

The focus of this research has been the urban planning perspective, turning these findings and the same type of questions to ICT designers could further enlighten the topic area by providing an alternative perspective.

9.4 RECOMMENDATIONS

There are a number of key recommendations that come out of this research. They include recommendations for urban planning, urban planning research, libraries and community development.

9.4.1 Urban Planning Recommendations

1. Urban planning should include the use of ICT for communication with community and in the development of applications specific to the needs of urban planning.

2. Urban planning can strengthen their own professional practice through the use of ICT to support communities of practice.

3. Urban planning research should further investigate and quantify the value and extent of networked interactions within individual local communities as well as in a theoretical framework.

4. Urban planners can utilise the urban informatics evaluation audit (presented in Table 8.3) to consider and assess ICT projects and proposals for public places. Similarly libraries can use this audit table to develop and consider ICT proposals for enhancing with public spaces too.

9.4.2 Recommendations for Local Government and Public Libraries

5. Local government and other government agencies can build strong places through the development of hybrid interactions based on place. The ability to overlay information about place, directed to places and community adds a new dynamic to how people can interact and enjoy places.

6. Libraries can deal with the current threats to their value and purpose by adding value to the digital content of their communities, and acting as a broker for community building and discussion. Libraries can build on their strategic position as the link between the community and knowledge in all its forms.

7. Libraries should continue to have defining roles as physical places – *third places* that bring people, ideas and knowledge together. Libraries also build strong digital places and embrace and emerging hybridity of *place* that enhances glocalisation of communities, with the strength of global networks combined with a local identity and culture.

8. ICT and urban planning disciplines can work together to develop applications and technology to support the enlivenment and creation of liveable urban environments.

9. Finally, communities can use the resources of ICT to build local economies specific to the local context, using principles of glocalisation. The liveability of urban environments can be greatly enhanced through the effective utility of the Internet and the technologies that support networked interactions within communities, neighbourhoods and between planning professional.

9.4.3 Conclusion

The relationship between ICT and planning presents many potential facets that will grow and develop over time. The increasing usage of ICT by the masses of the world's urban populations have resulted in changes to the patterns of communications and the behaviours effecting the relationships between time, place, and each other. Understanding these shifts and nuances is the responsibility of urban planners, placemakers and policy makers. This thesis has drawn attention to the relationships between people, place and technology toward this goal. It has highlighted some of the challenges of connecting the various stakeholders and the differing levels of usage across a population. It has also provided some practical tools for planners considering the potential and usage of ICT to communicate with their general public that is their communities. ICT includes the potential to connect with communities for a variety of purposes to the benefit of planning practice. Understanding the implications of these digital networked interactions on the design and use of public urban spaces will aid in the continued development and governance of urban environments towards the goal of ensuring they are vibrant and liveable for the 8.9 billion people that currently inhabit them and for the increasing populations of the future.

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Appendix A – Focus group questions phase 1

URBAN PLANNERS FOCUS GROUPS

Semi-structure Focus Group Questions Phase One

Introduction
Welcome and thank you.

- Housekeeping
- Toilets
- Drinks and catering
- Privacy and confidentiality
- Recording the session.
- Stress their benefit.

Introduce yourselves

Exercise 1:
Overarching Research Questions: How do local planners use ICT to leverage the potential benefits of active, civically engaged citizens?

Let them brainstorm, put it up on the whiteboard:
What's is the toolset for urban planners today to engage with citizens.
If you were to categorize them, how would you do it? (Separate them in tech driven vs non-tech driven)
What are the advantages/disadvantages for each?
What are the most important advantages that these tools need to be able to provide from an urban planner's perspective? (Red and Green Flags)
How would the perfect engagement tool look like? (Based on all the listed advantages)
How would you describe the emerging trends where community engagement is headed in the future? What's the current state of the art out there? Have you heard of other tools used elsewhere? Doesn't have to be techy!
What are the effects of community engagement on actual planning decisions? Realistically vs. ideally? Government view vs. Personal opinion? What holds it back?

Exercise 2: Categorize DIS data
Overarching Research Questions:
In what way are these technologies valuable to a local council?
How can the usefulness of the information/data collected through these applications be improved for the purpose of urban planning?

Present Discussions in Space background and data
Individually categorize a subset of messages.

Present your results and explain why you categorized them in that way.
In what way could these messages be useful for the field of urban planning?
Elaborate on any potential of these types of systems.

Episode 3: Kirralie – Impact of New Media

Overarching Research Questions:
The way we interact has undergone some major changes with the development of mobile telecommunications. In what ways/if any do you see this impacting on urban spaces.
To examine the question of whether their needs to be a responsive change for planners to physical place, to meet the needs of a connected and ubiquitous computing age?
A. List ways that behaviour has changed (Sticky notes – put up on whiteboard)
B. List types of in-space technologies (sticky notes- put up on whiteboard)
Question the need to respond to A or B

Conclusion

Thank you for your participation
If you feel you would like to add something further to what has been said today please feel free to email us. (All contacted by email in first instance)
Offer of gift vouchers please sign sheet

Appendix B – Interview questions phase 2

Interview Question for Library Users – Concord Library

1. Where do you like to go to socialise with friends or meet new friends?
2. How do you plan your get-togethers with friends?
3. Do you use computer based social networks (such as twitter, Facebook, MySpace) to organize getting together?
4. What do you think makes a good social space?
5. What do you think makes a good public place? What elements make it (like a mall or coffee shop or library) feel comfortable or good?
6. Do you like having accidental or unplanned meetings with people you know in these hang out spaces?
7. Do you like to plan your meetings with friends and acquaintances in public – hang out spaces?
8. How do you feel new technologies for social communication/ networking have changed the way **people interact** in public places?
9. Do you think people behave differently with mobile phones and computers?
10. Do you think there is anything we could change when making public space that would make them nicer places to be?
11. What questions should be raised about mobile phones, mobile Internet access and similar technologies and their impacts on public places? (Good and bad)
12. How do you see networking technology (mobile phones, portable computers of various forms) changing our cities and suburbs the future?
13. Has your mobile phone changed the way you meet people or use public spaces
14. Do you think Internet access and WiFi connection should be everywhere?
15. Do you like the idea of interacting with large community billboards with your mobile phone to say leave messages, comment or vote on community issues, to advertise events or sale items?

Appendix C– Interview questions phase 3

Interview Questions for Library Managers, Consultants & Librarians

- What are the issues for libraries in a digital age?
- What are the governance directions and what are the real and potential barriers for library futures?
- Are there opportunities that could or should be pursued in relation to social connection, digital media and physical design elements within libraries that could enhance their position within communities?
- What is the impact of digital media, particularly social media, on libraries - has this been adequately investigated? Are their barriers, risks or potentials that should be raised to the attention of policy makers?
- What adaptations and innovations do libraries need to pursue to secure their future?
- Are there any changes to the positioning of libraries within government structures that would better position them for the digital age?
- What connections (or strategic alliances) with other agencies and organisations are required or would assist in shaping library futures?

Appendix D – participant information forms

PARTICIPANT INFORMATION for QUT RESEARCH PROJECT

Understanding the implications of networked social interaction for the design of public urban spaces

Research Team Contacts	
Kirralie Houghton PhD Candidate Urban Informatics Research Group Creative Industries Faculty Phone: 0425 257648 Email: Kirralie.Houghton@qut.edu.au	Marcus Foth – Associate Professor Urban Informatics Research Group Creative Industries Faculty Phone: 07 313 88772 Email: m.foth@qut.edu.au

Description

This project is being undertaken as part of Kirralie Houghton's PhD.

The purpose of this project is to explore how people use public places as social places or gathering places, and if mobile phones and digital technology might change how people use and experience public places. The key questions that are being considered in this research and they are:

- What **adaptations and innovations** do libraries need to pursue to secure their future?
- What are the **key issues for libraries in a digital age**?
- What are the **strategic governance directions** you see libraries needing to take?

You represent a sample of the librarian managers who govern and direct library developments from whom we are seeking to learn more.

Participation

Your participation in this project is voluntary. If you do agree to participate, you can withdraw from participation at any time during the project until your interview is transcribed and becomes unidentifiable (at which point any voice recording will be destroyed). You may withdraw up to this point without comment or penalty. Your decision to participate will in no way impact upon your current or future relationship with QUT.

Your participation will involve an interview at QUT or other agreed location, and will take approximately 30 to 45 minutes. Questions will include things like:

- What are the issues for libraries in a digital age?
- What are the governance directions and what are the real and potential barriers for library futures?
- Are there opportunities that could or should be pursued in relation to social connection, digital media and physical design elements within libraries that could enhance their position within communities?
- What is the impact of digital media, particularly social media, on libraries - has this been adequately investigated? Are their barriers, risks or potentials that should be raised to the attention of policy makers?
- What adaptations and innovations do libraries need to pursue to secure their future?
- Are there any changes to the positioning of libraries within government structures that would better position them for the digital age?

- What connections (or strategic alliances) with other agencies and organisations are required or would assist in shaping library futures?

It is expected that this project will not directly benefit you. The benefits of this study will be to provide librarians, policy makers and urban designers with insight into the changes in social interaction and use of public places, which are occurring as a result of new technologies.

Risks

There are no risks beyond normal day-to-day living and work activities associated with your participation in this project.

Confidentiality

All comments and responses are anonymous and will be treated confidentially. The names of individual persons are not required in any of the responses.

Audio recordings may be taken to assist in the transcription and analysis of interviews. These will be stored in a confidential way. The only people with access to the tapes will be the researcher and supervisory team. It is possible for you to participate in the interview without being recorded if you so chose.

Consent to Participate

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

Questions / further information about the project

Please contact the researcher team members named above to have any questions answered or if you require further information about the project.

Concerns / complaints regarding the conduct of the project

QUT is committed to researcher integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Officer on +61 7 3138 5123 or email ethicscontact@qut.edu.au. The Research Ethics Officer is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

Thank you for helping with this research project. Please keep this sheet for your information.

CONSENT FORM for QUT RESEARCH PROJECT

Understanding the implications of Networked Social Interactions for the Design of Public Urban Spaces

Research Team Contacts	
Kirralie Houghton - PhD Candidate Urban Informatics Research Group Creative Industries Faculty Phone: 0425 257648 Email: Kirralie.Houghton@qut.edu.au	Marcus Foth – Associate Professor Urban Informatics Research Group Creative Industries Faculty Phone: 07 313 88772 Email: m.foth@qut.edu.au

Statement of Consent

By signing below, you are indicating that you:

- have read and understood the information document regarding this project
- have had any questions answered to your satisfaction
- understand that if you have any additional questions you can contact the research team
- understand that you are free to withdraw at any time, without comment or penalty
- understand that you can contact the Research Ethics Officer on +61 7 3138 5123 or ethicscontact@qut.edu.au if you have concerns about the ethical conduct of the project
- understand that the project will include audio recording

agree to participate in the project

Name _____

Signature _____

Date _____ / _____ / _____

Media Release Promotions

From time to time, we may like to promote our research to the general public through, for example, newspaper articles. Would you be willing to be contacted by QUT Media and Communications for possible inclusion in such stories? By ticking this box, it only means you are choosing to be contacted – you can still decide at the time not to be involved in any promotions.

☐ Yes, you may contact me about inclusion in promotions

☐ No, I do not wish to be contacted about inclusion in promotions

***Please return this sheet to the investigator*.**

WITHDRAWAL OF CONSENT FORM FOR QUT RESEARCH PROJECT

Understanding the implications of Networked Social Interactions for the Design of Public Urban Spaces

Research Team Contacts	
Kirralie Houghton - PhD Candidate Urban Informatics Research Group Creative Industries Faculty 0425 257648 Kirralie.Houghton@qut.edu.au	Marcus Foth – Associate Professor Urban Informatics Research Group Creative Industries Faculty Phone: 313 88772 Email: m.foth@qut.edu.au

I hereby wish to WITHDRAW my consent to participate in the research project named above.

I understand that this withdrawal WILL NOT jeopardise my relationship with Queensland University of Technology.

Name _____

Signature _____

Date _____ / _____ / _____

University Human Research Ethics Committee

APPLICATION FOR REVIEW OF LOW RISK RESEARCH INVOLVING HUMAN PARTICIPANTS

PLEASE NOTE:

If you do not see the red *"hidden text"* (which provides guidance to the questions):

1. Click on the Office Button (top left of the screen) then click on "Word Options" (bottom right)
2. Choose "Display", then under "Always show these formatting marks on the screen" tick "Hidden text"

If you wish to view hidden text when you print the document:

1. Click on the Office Button (top left of the screen) then click on "Word Options" (bottom right)
2. Choose "Display", then under "Printing Options" tick "Print hidden text"

****PLEASE ENSURE HIDDEN TEXT IS NOT PRINTED WITH YOUR FINAL SUBMISSION****

APPLICATION SECTIONS:

A. Research Proposal Overview

B. Participant Overview

C. Data Management

SECTION A: RESEARCH PROPOSAL OVERVIEW

1. Summary Information – *Please provide an answer to each question in this section – N/A is not acceptable*

1 Project Title

Understanding the Implications of Networked Interactions on the design of Public urban spaces

1.1 Brief summary of project in lay language

Use qualitative data to consider the implications of mobile telecommunications on the practice of urban planning.

1.2 Participant summary

planners, public space users, managers

1.3 Summary of research merits

Focus groups, qualitative interviews and case studies

1.4 Provide a brief justification for considering this a low risk application.

2. Potential Risks and Benefits – *Please provide an answer to each question in this section – N/A is not acceptable*

2 Potential Risks — indicate if there are any potential risks associated with the project?

none

2.1 Managing the risk

2.2 Potential Benefits — indicate if there are any potential benefits associated with the project and who benefits?

greater understand of how we use and design public spaces

2.3 **Balancing against the risks**

3. Other General Information – ***Please provide an answer to each question in this section – N/A is not acceptable***

3 **Location of research – where the research will be conducted**

QLD – Brisbane and NSW – Concord in libraries, public places, and offices

3.1 **Is the QUT Human Research Ethics Committee (UHREC) the primary or only ethics committee reviewing this proposal?**

yes

3.2 **Estimated timeframes for the project**

Please note: Data collection cannot commence until you have received formal written approval.

1 **/**	**/ 2010**	**PROJECT START**	1 **/** 2**/**	**DATA COLLECTION TO START**
1 **/ 2**	**/ 2013**	**PROJECT TO END**	1 **/** 2 **/2013**	**DATA COLLECTION TO END**

SECTION B: PARTICIPANT OVERVIEW

1 **Who will be approached to participate?**

urban designers and users of public places

1.1 **Approximately how many participants will be approached?**

40

1.2 **How will the participants be approached?**

letter of introduction and invitation for planners, intercept interviews for public

1.3 **How will the participants provide their consent to participate?**

signature on consent forms or verbal (recorded if appropriate)

1.4 **Will the study involve participants who are unable to give informed consent?** ☒ NO ☐ YES

1.5 **Will the potential participants be screened?**

1.6 **Will participants be offered reimbursements, payments or incentives? Ensure details of any reimbursements, payments or incentives (e.g. gift voucher) are provided on the Participant Information Sheet.**

yes incentives may be required – gift vouchers

1.7 **Is there an existing relationship with participants?**

yes through planning networks

1.8 **Is it proposed to conduct a debriefing session at the end of the research (or at the end of each participant's involvement)?**

not necessary

1.9 **Will feedback, the outcome / results of this research be reported to participants**

yes through planning network

SECTION C: DATA MANAGEMENT

1. Future Use of Data

1.1 **Will any of the data collected be used by yourself, your students, or others for any other purpose other than for this project? If yes please describe below and ensure this is outlined in your participant information sheet and consent form.** ☒ NO ☐ YES

2. Procedures & Protection

2.1 **What data collection procedures will be utilised**

☐	NO	☒	YES	**QUESTIONNAIRE / SURVEY**	☒ NO	☐ YES	**ARCHIVAL RECORDS**
☐	NO	☒	YES	**INTERVIEWS**	☒ NO	☐ YES	**OTHER INSTRUMENT**
☐	NO	☒	YES	**FOCUS GROUPS**			

If YES provide details of other instrument. If insufficient space, please provide an additional document.

2.2 **Have the data collection procedures been previously approved by QUT or are they an academic standard instrument?** ☐ NO ☒ YES

2.3 **Provide brief details on prior approval or where instruments have been used previously e.g. under a similar context to this proposal.**

2.4 **How will the data be recorded**

Individually Identifiable	☐ NO	☒ YES
Re-Identifiable or Potentially Re-Identifiable	☒ NO	☐ YES
Non-	☐ NO	☒ YES

2.5 **Data**

To be retained by researcher

2.6 **Data**

By researcher

2.7 **Protecting Confidentiality**

Yes

3. Storage & Security

3.1 **Records stored for required period** ☐ NO ☒ YES

3.2 **Location of storage (room / floor / building location)**

3.3 **Approval from Faculty for storage if off-site** X N/A ☐ NO ☐ YES

3.4 **Who will have access to the stored data?**

3.5 **How will access to the stored data be controlled?**

3. Privacy of Information Held by Commonwealth Agencies

3.1	Is this a **medical research** proposal (including epidemiological research)?	☒	NO–**go to 4**	☐ YES
3.2	Does the proposal require the use or disclosure of information from a **Commonwealth agency**?	☐	NO	☐ YES
3.3	Does the proposal require use or disclosure of **personal information?**	☐	NO	☐ YES

3.4	Does the proposal involve **not obtaining consent** from the individuals to whom the information related?	☐	NO		☐ YES

4. Privacy of Information Held by Private Sector

4.1	Does the proposal involve: • Research relevant to public health or safety? • The compilation or analysis of statistics relevant to public health or safety? • The management, funding or monitoring of a health service?	***OR*** ***OR***	☒	NO– **go to 5**	☐ YES
4.2	Does the proposal involve collection, use or disclosure of information from a **private sector organisation**?	☒	NO	☐	YES
4.3	Was it **necessary** to collect, use or disclose **health information**?	☒	NO	☐	YES
4.4	Was it **impracticable** for **consent to be obtained** from the individuals to whom the health information related?	☒	NO	☐	YES

5. Specific details

Where you have answered "Yes" to any of the questions in Parts 3 and 4 above (access to Commonwealth or Private Sector Health Data), please provide the following information.

5.1 Agency

5.2 Number of records

5.3 Information Privacy Principles — Will this access constitute a breach of an Information Privacy Principle (e.g. access to this data without the prior approval of the participants)?

SECTION D: CHECK LIST

Please check off each item (as appropriate) that will be submitted with your application. You must provide all data collection documents when submitting your application. Incomplete applications will not be reviewed and will be returned to the researcher.

General

☒ YES	☐ NO	Faculty Research Ethics Advisor input / advice has been gained

Coversheet

☒ YES	☐ NO	Faculty Research Risk Assessment Form – either approved or submitted to Faculty
☒ YES	☐ NO	Submit your complete application electronically to ethicscontact@qut.edu.au
☐ YES	☒ NO	For **Faculty of Education** applications, please submit your application to k.dooley@qut.edu.au
☒ YES	☐ NO	Provide a copy signed by yourself, your supervisor (if applicable) and the Head of School, once the signatures have been obtained to **Research Ethics Unit Level 4 88 Musk Avenue Kelvin Grove**

Application – include...

☒ YES	☐ N/A	Email invitation text / Telephone invitation script / lecture invitation script
☒ YES	☐ N/A	Recruitment flyer / poster / newspaper advertisement / social networking sites text
☐ YES	☒ N/A	Any other recruitment materials
☒ YES	☐ N/A	Brief literature review if not included under Section A.1.1
☐ YES	☒ N/A	Ethics approvals from collaborating institutions
☐ YES	☒ N/A	Permission from organisations where you will be conducting the research (email or letter*****)
☐ YES	☒ N/A	Translator–Transcriber Confidentiality Agreement
☐ YES	☒ N/A	Intellectual Property (IP) assignment document

Participant Information Sheet / Consent forms**

☐ YES	☒ N/A	Participant Information Sheet for experimental procedures
☐ YES	☒ N/A	Participant Information Sheet for anonymous questionnaire
☒ YES	☐ N/A	Participant Information Sheet and Consent Form for interview / focus group
☒ YES	☐ N/A	Participant Information Sheet and Consent Form – Image Release
☒ YES	☐ N/A	Withdrawal of Consent Form (if written consent form will be gained)

Data collection Tools

☐ YES	☒ N/A	Questionnaire(s) / survey(s)
☒ YES	☐ N/A	Interview / focus group questions
☐ YES	☒ N/A	Details of all tests with sufficient information to judge risks involved in their use

Other documentation

☐ YES	☒ N/A	Please provide details:

***** These need to be official documents on letter headed paper where possible.

****** Ensure that if submitting multiple forms that each is clearly labelled with participant group and/or data collection tool, where appropriate.

Appendix E – Sample recruitment letter

Understanding the implications of networked social interactions for the design of public urban spaces
Kirralie Houghton (QUT PhD candidate student number 7371187)
Ethical Clearance Submission, June 2010

A sample email letter of invitation to potential focus group participants:

Dear [**PARTICIPANT**]

'I'm looking for urban designers and planners to spend 60 minutes in a focus group to help research about the way mobile phones and other new forms of mobile communication are affecting public spaces and how we can design these spaces better in light of these changes.

I am a PhD student currently undertaking research at Queensland University of Technology; my background is a town planner with experience in both local government and consultancy. My PhD project is titled: *Understanding the implications of networked social interactions for the design of public urban spaces,* yes a mouthful, and in essence it means – will new technology such as the mobile phone and mobile internet access change the way we socialise and consequently the need for and use of our public places, and what does that mean for designers of those spaces. This research is supported by the Urban Informatics Research Group (www.urbaninformatics.net) and supervised by Associate Professor Marcus Foth.

Your experience as a planner (designer/manager) of these spaces would be of great value to my research and I would like to involve you in a focus group and possibly an interview about the changes you may have observed, impacts and thoughts you have on the future of public urban and suburban spaces.

Your participation will help in my research by understanding the current practice and views of the design professions associated with the development of public spaces. Your contribution (either attributed or anonymous, you decide) will form part of my PhD research thesis.

Some of the key themes that I am interested in exploring with you:

- Community Consultation & Engagement
- The effect of community consultation on urban planning decisions
- Current use of ICT
- Impact of new media (mobile telecommunications and computing) on the design of public urban spaces in relation to changing behaviours in general.

The focus group will take approximately 60 to 90 minutes. The focus group will be held at (TIME) at QUT Kelvin Grove campus room A105 on (DATE).

We would like to offer you a gift voucher of $100 in appreciation of your time and participation in the project.

Please also find attached a participant information sheet and consent form with further information about the study. If you have any questions about the research, please do not hesitate to contact me on: 0425257648 or Kirralie.Houghton@qut.edu.au. I wish to thank you for taking the time to consider my request and I look forward to hearing from you.

Kind regards

Kirralie Houghton